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1908.

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the thyroid, the onset is, as a rule, after thirty-three years of age. Kocher makes the statement that if a patient has suffered with a simple goiter for several years, a sudden, rapid enlargement should be regarded as indicating the possibility of a malignant change, and operative removal should be performed at once. (Bloodgood.) I have seen a few cases with this history which have proved to be nonmalignant. In these cases I believe that the small tumor was a solid adenoma and that the sudden rapid growth was due to cystic formation. Adenoma of the thyroid as a rule grow slowly. In a large majority of cases there are no symptoms except the tumor. The absence of symptoms is due to the slow growth. Pressure symptoms may not have a definite relation to the size of the tumor. In a rapidly growing tumor, especially if associated with inflammation about the capsule, pressure symptoms may appear before the growth has reached a relatively large size. In the exophthalmic goiter we find all the attending symptoms; exophthalmos, tachycardia, tremor, gastrointestinal disturbance, profuse sweating, rapid loss in body weight, increased temperature, and mental disturbance, without much enlargement of the gland.

It is not necessary to speak of the anatomy of the Thyroid Gland, but I would like to call your attention somewhat to those little life sustaining organs, the parathyroid glandules. Our present knowledge of the functions of these parathyroid bodies is very meager, yet we know that they perform some highly important function. In man parathyroid bodies are constantly present. The prevailing number is four-two on each side. This number is often diminished by one or more, and is sometimes increased. The glands usually occur in pairs, a superior and an inferior body on each side. Dr. Pool of New York gives the following as the most frequent situations: "The superior, the more

constant in position, lies close to the thyroid in the middle third of its posterior border, approximately on the level of the lower border of the cricoid cartilage. It lies in a plane posterior and external to the terminal branches of the inferior thyroid artery and recurrent larvngeal nerve. On the left side the gland is frequently further posterior than on the right. The inferior is often intimately associated with the thymus, lies at or below the inferior pole of the thyroid or on the posterior aspect of the lower third, in which case it is frequently found anterior to the recurrent laryngeal nerve and inferior thyroid artery, close to the thyroid gland at the entrance of the lower twigs of the artery."

These anatomical positions often vary. The superior body may be on a level with the superior pole of the thyroid gland. The lower glandule is rarely as high as the middle of the thyroid, is usually near the lower pole, and may be considerably below it. (Halsted.) The parathyroid bodies are very small and may be easily overlooked. Lymph nodes, haemolymph nodes, accessory thyroids, thymus rests, and fat may be mistaken for these little bodies. Each parathyroid has its special artery given off, usually from the inferior thyroid artery. These little arteries are large in proportion to the size of the gland supplied, and aid in the identification of the gland. While the parathyroid arteries almost invariably arise from the superior and inferior thyroids, there must be an anastomosis by way of the oesophageal or other branches, else there would not be recoveries following the simultaneous litigation of all four of the thyroid arteries.

The subcapsular operation of Dr. Charles H. Mayo is very convenient and one is less likely to injure the parathyroids. The skin incision should be made to correspond with one of the transverse lines of the neck, and so

placed that the resulting scar may be entirely hid by the collar. The skin, superficial fascia and platysma muscle are raised in one flap. Be careful to double ligate all vessels. The head and shoulders of the patient should be somewhat elevated. In this position the venous circulation will be aided by gravity, and hemorrhage more easily controlled. Divide the sterno-hyoid, omo-hyoid and the sterno-thyroid muscles near their insertions, if they cannot be conveniently drawn aside, and reunite them with catgut before the operation is completed. Divide the fascia to the full extent of the tumor. The gland is now gently grasped, and carefully delivered, great care being taken to ligate the superior and inferior thyroid vessels close up to the tumor, and within the capsule. If the thyroid is drawn well to the opposite side of the neck, the recurrent laryngeal nerve is usually exposed and is little endangered. Free the attachments down to the trachea, crush the isthmus ligate and cut away the tumor. I prefer to close the wound with interrupted horse-hair sutures, and with a cigarette drain, as there is always some oozing.

When death occurs it is usually due to the anaesthetic, hemorrhage, shock, exhaustion, acute thyroidism, tetany, infection. or pneumonia. The mortality in thyroid operations has been very much reduced during the last decade. In simple goiter the mortality will fall below one per cent.

For exopthalmic goiter, Kocher reports 254 cases with nine deaths—3.5 per cent. Mayo reports 176 operated on with nine deaths, and further adds: "There were four deaths in the first sixteen operated on; three in the next thirty cases, and three in the remaining cases. There was but one death in the last 75 operations. The earlier operations were done with a considerable loss of blood. They were cases in which he medical treatment had failed. They

were operated on at a bad time, and the result was a high mortality." With careful preparation this is largely disappearing, and Dr. Mavo believes that one can now look on hyperthyroidism as a surgically curable disease; not in all cases, but in those turned over to the surgeon by the medical man not too late when they feel that these cases have been subjected for a reasonable length of time to medical treatment without relief. Such cases can be looked on as being susceptible to a cure by surgical means. (A. M. A. Journal, Oct. 12, 1907, p. 1244.)

As to the end results in operation for exophthalmic goiter Kocher says: "There is not a single case of ours in which the potient has not been much benefited by the thyroid operation. We have cured by our operation the patients in 83 per cent. of all our cases. There are 73 per cent. of the patients with the so-called primary disease herled; 92 per cent. of the patients having the disease combined with ordinary goiter, and 100 per cent, of the patients with vascular goiters. Some of the observations date back 15 and 17 years since the time of observation, without recurrence of the disease, provided that the operation was carried so far that vascular symptoms of the thyroid disappeared completely. In cases of this type the patients are all completely cured, so that no symptoms of exophthalmic goiter remains. But the time required for recovery has varied greatly, it being especially long before the heart and eyes became normal again." In molignant cases the mortality is high, owing largely to the fact that these cases come into the hands of the surgeon after the disease has extended beyond the gland. The ultimate recoveries in malignant cases are very

When shall we operate? Operation is indicated in benign growths in which enlargement takes place after two or

more years of quiescence even without symptoms. This later growth indicates an adenomatous, cystic, colloid or malignant change.

In Grave's disease, after a systematic course of medical treatment has failed to relieve the condition, or when symptoms of exophthalmic goiter develop in a benign growth of the thyroid. In malignant disease, before metastases has taken place.

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Reid Hunt, M.D., A. M. A. Journal, Oct. 19, 1967.

THE IDEALS OF A COUNTY MEDICAL SOCIETY.*

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As your retiring president it is my pleasant duty to give an account of the work accomplished by our society during the past year; and with your indulgence I shall offer some suggestions looking toward the betterment of our local profession and the strengthening and upbuilding of our society for the future.

Before entering upon the main discussion of my paper, however, permit me to thank the members of the Los Angeles County Medical Association for the confidence imposed in me and the honor done me by electing me to this important and honorable position. I have filled it to the best of my ability and only regret that absence from the city prevented me from being present at several of the meetings.

In the plan of reorganization of the medical profession of the United States, by which the chaotic mass of medical thought and potential energy is being shaped into an organized force standing for a high standard of efficiency among

its members and a better protection of the public against incompetence, the county society becomes a most important body. It may be said that it has lost some of its dignity. It can no longer be an elite, exclusive organization. But what it has lost in this direction, if it has lost anything, it has gained in others. It has widened its scope. It is the local organization where all reputable practitioners of medicine may meet on a common ground, for the promotion of good fellowship and mutual interests. It is where the interests of the individual as a member of the medical profession is protected. It is whence measures for the public welfare emanate.

The county society is the judge as to the fitness of members for membership not only in its own body but in the State Society and in the American Medical Association. In exercising this authority, a spirit of liberality should be pursued. Men who are graduates in medicine, regardless of their school

^{*}The address of the retiring President, read at the annual meeting of the Los Angeles County Medical Society, December 20, 1907.

of study, are eligible to our society providing they are honest and honorable members of the profession, and providing they are willing to forget the differences of school and practice "medicine." Nor is a man, in the spirit of our reorganization, disqualified from membership for some misdeed of the past, providing he is honest and honorable now and willing to remain so and uphold the dignity of our profession. The county society is a school where the weak members may be helped, and where by the exercising of a fostering care men may be kept in line and aided in the practice of honorable medicine where without such aid they would depart from the paths of right and reflect discredit upon the profession which in the eyes of the public they represent. While this liberal policy is commendable, and has a tendency to strengthen the medical organization, and while it should be continued, yet it should not be so construed as to allow men, who are undesirable because of lack of character and dishonesty of purpose to become members, nor should it protect any such who might have already secured membership,

During the past year your president has endeavored to be punctual in calling the meetings to order, and he would suggest that this policy be continued. If our meetings are announced for 8:15 they should begin at that time. When the members once learn that the meetings will begin promptly they will come on time; but if they know they will begin late, they will have an excuse for delay in coming to the meetings. The member who comes on time deserves consideration, but if the policy of delay is followed, his interests are ignored.

There are two very important purposes served by the county society: the scientific and the social.

The scientific program of each meeting should be planned with care. The subjects should be of general interest

and for the most part practical, although it is well now and then to have discussions of questions of a theoretical nature. It seems to me that it would be an improvement in our program and that it would add interest to our meetings if more attention were paid to the newer things in medicine. This suggestion is not made in a spirit to reflect discredit upon the work done in the past, nor is it done in a spirit unmindful of the importance of frequent discussions of the older and more established truths in medicine: but if the members of our society are to make the most of their opportunities, they should make the county society a post-graduate school. No important new discovery in medicine should pass by without no-The attention of the members should be called to these new things and this will create a keener interest in medicine and a better scientific spirit among our members.

The arranging of scientific programs for the county society is no small task. Realizing that the meetings of the society belong to the members and that the meetings should be as good as they are willing to make them, and desiring that the members should all feel that their wishes had been consulted, the president addressed a circular letter to every member of our society when he entered upon his year's work. In this letter each member was asked what subject he would be willing to present before the society during the year and what subjects he would prefer to near discussed. He realized that there was some danger in such a policy, for it was possible that there would be so many replies that all could not be accommodated on the programs; but to his astonishment to the three hundred and sixty letters sent out, replies were recived from less than one dozen members, consequently he was left, with the help of the secretary, to make out the program for about forty meetings for

the year, with what success you are left to judge.

Believing that the president should not carry the entire responsibility of preparing programs for the meetings and realizing that the programs would perhaps be more varied if they were the result of the thought of a committee, I believe that our meetings might be better and the subjects more representative of the wishes of the members of our society, if they were prepared by a committee on scientific program of which the president should be a member.

The weekly meetings of the past two years have been an unqualified success and it is to be hoped that they may be continued. That they have met with the approval of the members may be judged from the manner in which they have been attended, there being an average attendance of fifty-one, and there is no question but that this attendance may be increased by exercising great care in preparing programs. A part in the program of a society is not only an honor but a duty. It is a duty that every member owes to his society to be willing to give his best efforts to making the programs interesting and successful, and the president has the right to expect of those who put him in the chair that they will respond to his call and help out in the program when requested to do so.

It is with pride that I call attention to the added facilities for study and literary research afforded by the Barlow Library. This library is open to every member of the medical profession of Southern Colifornia. The medical profession of the western coast is in a unique position. It is shut off from the East with its old established medical centers, and consequently must depend on its own resources. The profession here will be just as progressive and just as scientific as it makes itself. With our growing city, and the influx

of patients who are accustomed to having the best treatment, we must be prepared to give it to them. This library having as it does all the leading current medical periodicals of the world. affords an exceptional opportunity to our medical profession to investigate the newest and best that is brought out in medical science. The bound volumes of books and back numbers of periodicals also afford a storehouse of medical knowledge in such shape that it can be referred to readily. I would bespeak for this library the cordia, financial support of the members of the county society. I would also ask you to use it whether you support it financially or not. Nothing would please the donor more than to know that all of our physicians are making daily use of the library.

The social feature of our society was fostered by the buffet lunches which were served on the nights of our clinical meetings. These should be resumed as soon as our finances are in such condition as to warrant it. Nothing promotes good fellowship among the members of our profession so much as getting acquainted; and, while we toss in our beds suffering from insomnia owing to the sandwiches and other indigestibles furnished by the committee we have an opportunity to think over the pleasant moments spent with our colleagues around the festive table.

The establishment of branches of the county society in outlying towns is a very important link in our organization. This work should be fostered and the parent body should keep in close touch with and aid these local branches as much as possible. While it is well to keep the machinery of the society as simple as possible, it seems to me that organization could be facilitated and our branches could be assisted if the parent body had a visiting committee whose duty it should be to visit ach

branch once a year, or oftener if it seemed best, in order to promote mutual interest. While this work might be done by the president, yet too much must not be put upon him.

That you may realize what your society has accomplished during the past year permit me to recall to your minds a few of the more important measures, which it has instituted or assisted in instituting outside of its regular scientific work.

In the first place, the Los Angeles County Society played an important part in securing the present medical law. Our organization, four hundred strong, standing for a high standard of medical education, was not without weight with the law-makers of our state. Then, too, you were represented by two of your members who went to Sacramento in order to look after your interests and do what lay in their power to uphold the standard of our previous bill.

While the new medical practice act has received the general approval of the medical profession of the state, yet it has met with some opposition. This was to be expected, for the new act is a great advance over the previous medical practice act. It has placed California in the advance of other states in this matter, although if we may judge of the feeling of other states by the proposed bills before their legislatures during the past year we feel that our example will soon be followed generally. Our bill has been received well by those men both within and outside of the state who stand for a high standard of medical education and an adequate protection for the public.

Some strong points of the new law are as follows: It is charitable. It recognizes that men may have differences of opinion in matters medical and yet be honest. While it is not the function of medical legislation to force the

public to employ the graduates of any particular school of medicine it is its function to prescribe such requirements for the regulation of the practice of the healing art that the public may be protected from ignorance and gross incompetence.

This medical practice act stands upon the irrefutable fact that a man in order to practice medicine, or in order to diagnose and treat disease, no matter what his method of treatment may be, must possess certain knowledge before he is fit to receive the confidence of the public. He should know the structure of the human body. He should know the functions of the various organs. He should know how these are affected by disease. He should know the cause of disease and the symptoms produced by it. He should know the principles of life and the rules which regulate proper living. In other words, any man who wishes to practice the healing art should be grounded in the fundamental branches which teach the facts regarding the body and its functions in health and disease; should know the things which are conducive to the maintenance of health; should be familiar with disease, its causes and methods of combatting it. The man who knows this can be trusted to apply his remedial measure.

The point that is most distasteful to some of our members is the recognition of osteopathy, naturopathy and other such pathies. In reply I would say that the followers of these cults are not recognized as physicians and surgeons. They do not want to practice medicine, or at least by their course of study they indicate that they do not. They believe neither in medicine nor surgery, but in treating disease after their special methods. This the new act allows them to do. This they were allowed to do under the old act, and would be allowed to do under a new act which they would

have obtained had they not cast their lot with us.

While some who are practicing these cults are incompetent, we find among them able and worthy men and women. These are recognized by the new act, providing they can pass the examination in the fundamental branches, as being competent, not to practice medicine and surgery, but to practice osteopathy or naturopathy or what not. Without this regulation by our act these same men and women would be allowed to practice their cults whether they were able to meet these broad and charitable but necessary requirements or not. The standard of these cults must be raised by this act and the result will be that incompetents will be weeded out and the osteopaths and practitioners of other cults will eitner come up to a high standard of efficiency as practitioners of their cults or they will broaden their horizon and become practitioners of medicine. This act will elevate them. It cannot lower us, and the broad, charitable grounds upon which the medical profession is standing in this matter puts us beyond the criticism of selfishness and jealousy. It is not our purpose or province as members of the medical profession to say that the public must employ regulars, homeopaths and eclectics, but it is our sacred duty, since we have the knowledge of what is necessary, to say that the health and the lives of the citizens of California must not be left to the mercy of ignorance and commercialism. This we have said in the present act, and in this we are upheld by the best practitioners of all schools and all pathies.

This new medical practice act makes it possible to carry on the prosecution of quacks in an energetic and effective manner, and empowers the board to revoke licenses of men who are preying upon the unsuspecting public and deceiving them by false promises in order to extort money from them. This law, if energetically enforced, will clear our city of the quacks who have been so brazenly defiant heretofore.

Our member of the Board of Examiners from the South, Dr. Mattison, has taken up the work with a vim, and has done both the medical profession and the public a good service. The public does not differentiate between the advertising fakir and the honest ethical physician. All are physicians to the people, and, if anything, the one who advertises most extensively is oftener considered by them to be the most learned and skilled. It is not a matter of unconcern to either the laity or the medical profession that these advertising charlatans be permitted to carry on their nefarious, unprofessional, unscientific commercial enterprises. It is a blow to scientific medicine, an insult to honest practitioners and a dangerous imposition upon the public. This society should raise a round sum of money from personal contributions of its members to enforce this law. It should uphold and assist our member of the State Board in his energetic campaign against the illegal practitioners and by these acts show the people that our Medical Society stands for honesty in the profession and for an adequate protection of the people.

We view with pleasure and satisfaction the continued energetic campaign against illegitimate pharmacy. Pharmaceutical houses are now becoming more modest, they are having much more consideration for the profession and are not so insistent on telling the physicians the remedy that he must use and the exact method of its administration as they were formerly. Less secrecy, more candor and a clearer cooperation will result from this reaction, and all concerned, including the patient, will be benefited thereby

The County Society is just completing one of its most successful years in all respects; and I point with pride to its accomplishments for the public good. The most unselfish of all professions, it kills the goose that lays the golden egg by spending its energy in the prevention of disease. This it could stand if it were but appreciated by the public; but, strange to say, all measures for the prevention of the spread of disease must be forced upon the people without their co-operation and in many instances against their opposition.

The activity of our County Society aided very materially in the prevention of the repeal of the compulsory vaccination law at the hands of the last Legislature. It will be necessary to be alert and keep up this fight as long as ignorant opposition forces the issue.

We have especial reason to be proud of the work accomplished by the Pure Food Committee during the past year. Through its activities and co-operation with the health authorities much work has been done. The dairies of the surrounding country, tributary to Los Angeles and Pasadena, have been cleaned up and the citizens of Los Angeles are securing a much better grade of milk, and a product much freer from filth. There is still work to be done along this line and the committee has every hope that it may in the near future be able to supply certified milk to these cities. The work of this committee should be continued and the committee should secure the hearty approval and earnest co-operation of the profession.

Another important measure secured for the citizens of Los Angeles by the activity of members of the medical profession is the anti-smoke ordinance. This will be a great blessing to our fair city, and will doubtless result in an improved sanitary condition for a considerable portion of the city of Los Angeles.

In no way has the influence of our County Society been shown to greater advantage than in the recent clean up ordered by the City Council. When it was learned by the members of the County Society that the Council was going to cripple an already inadequately manned health board by the reduction of the force of inspectors at a critical time when our coast is the seat of bubonic plague and our fair city is in danger of being infected, our Society at once sent a deputation to the City Council for the purpose of showing them the danger of such a course. The result, you all know. The city authorities acted promptly and wisely and increased the efficiency of the Board of Health so that it could at once initiate a cleaning up of the city. While the work has not been accomplished to the satisfaction of the Health Board because of insufficient time compared with the enormity of the task, yet a great deal has been accomplished, and if the people will but carry on the work and co-operate as they should, this expenditure of time and money will be well repaid.

It is with pride that we mention the Testimonial Dinner given by the medical profession of Los Angeles county to Dr. Powers, our efficient, untiring Health Officer. We are proud that this emanated from our society. This demonstration of confidence and esteem on the part of the profession can not help but make his tasks lighter, for it demonstrates to the people that Dr. Powers stands for the things that are advanced by scientific medicine. It was a tribute to a brave, deserving, fearless officer who has devoted many of his best years to enforcing the rules of health which our profession knows are right and humane, upon an unwilling public.

Not the least important act of the County Society during the past year was the appointment of the Committee on Public Hygiene. To its detriment,

the medical profession has held aloof from the public and failed to take it into its confidence. Medicine has been shrouded in mystery. The people have looked upon it with awe and faith but not with understanding. It is now time to unveil and to let the public know what scientific medicine means. Scientific medicine stands for the eradication of disease, but the public does not know it. Scientific medicine includes in its armamentarium the employment of all natural measures for the cure of disease but the public does not know it. Hygienic living, open air life, proper bothing, regulated living, proper diet, pure food, massage, cheerfulness and happiness, are recognized and constantly employed in the treatment of disease by the graduates of medicine and surgery, yet a great many people think we are only drug doctors. Such ignorance is often willful, but it cripples our usefulness with certain people for they do not know the truth. It shall be the purpose of this Committee on Public Hygiene to carry on a campaign of education through the public press. Through the co-operation of one of the morning daily papers we have arranged to give the people authentic articles on subjects of vital interest to them.

These columns will contain scientific discourses on subjects pertaining to public health, hygiene, pure food, pure milk, the prevention of diseases like tuberculosis, plague and smallpox and all subjects of allied nature will be treated of authentically by this committee: This will bring our society in close touch with the public. It will show that we stand for prevention of disease as well as cure, and it will demonstrate to the people that we are plain, practical, scientific men working for their good and for the good of our city.

This undertaking is one of great importance as well as one carrying with it great responsibility. Its success, and it will be successful, means much honor for our society and much good for the people of our city.

With this short resume of what our society has done during the past year and with these few suggestions relative to its work for the future, I again thank you for the honor conferred upon me, in choosing me as your president, and for your cordial support which has made the success of the year possible; and pledging to the society my earnest support for the future, I bespeak for your new president the same consideration and good will accorded me.

PLAGUE: ITS PATHOLOGY.*

BY W. M. HORTON, M.D., LOS ANGELES, CAL., CITY BACTERIOLOGIST.

One of the most interesting features concerning the etiology or bacteriology of plague is its geographical distribution and the history of its epidemics. As far back as history goes we have records of epidemics of the most serious nature but these records are too vague to make sure that the pest alluded to was that of bubonic plague.

According to Hirsch the first authentic epidemic of plague occurred in

Libya, Egypt and Syria about the end of the third century.

It spread for the first time in Europe in A. D. 542. At this time it originated in Egypt and extended over the entire Roman Empire producing most frightful devastation, destroying the entire population of towns, converting the country into a barren desert. This epidemic lasted for a period of fifty or sixty years and is spoken of as the

^{*}Read before the Southern California Public Health Association, Riverside, Cal., December 2, 1997.

plague of Justinen. From that time until 1841 it has recurred again and again in different parts of Europe, the last epidemic occurring at Constantinople.

During 1878 and 1879, small epidemics occurred in various parts of Russia. It was again seen in 1899 in Oporto, and in Glasgow in 1901. It visited England in 1664-5. At this time London of 460,000 inhabitants lost seventy thousand of its number. Egypt seems to have been the favorite haunt of the disease. In Tripoli it appeared in 1856 until 1859. Again it was seen in 1874. In Arabia we find it in an endemic form since 1853. Epidemics have been frequent in Unganda and the German East Africa. Many epidemics occur in Turkestan. China and Mongolia. Over in India we find numerous epidemics in the nineteenth century. Here many thousand people have died from the disease but for some reason it has remained more or less local. In fact it is probable that the disease has always been present in this section.

In 1895 it appeared in Bombay and Calcutta. It has been endemic in Yunnan a province of China, for many years. It was particularly active after the great Mohammedan rebellion. From Yunnan we find it following the trade routes taking hold in Pokhai on the Gulf of Tonquin. Here a severe epidemic occurred in 1883.

In 1894 it reached Hongkong, killing sixty thousand of a million and a half of its population. It was during this epidemic that Kitasato and Yersen working independently isolated the specific micro-organism.

Recently we find it taking hold in Brazil, Argentine, Mexico, and for the second time in San Francisco. Plague in an endemic form is present in five locations. In Yunnan, province of China, in Himalayas which lead to the outbreak in Bombay, in the mountains south of Mecca, and in the British East

Indies near the source of the White Nile, and San Francisco.

Proofs are now complete that the specific cause of this disease is the cocco-bacillus, which was first discovered by Kitasato and Yersen during the Hongkong epidemic of 1894. The organism varies in length from one and five-tenths to one and seventy-five hundredths micro-milometers, by one-half to seven-tenths mirons wide.

The organism can be found in great abundance in the spleen, intestines, lungs, kidney, liver, blood and other viscera and in the early bubo in pure cultures. It is found in the sputa in great numbers from patients having the pneumonic type of the disease. It has also been isolated from the urine, faecies and menstrual flow.

The organism is a short, thick cocco baccillus, with a rounded end, and although claimed to possesss one flaggella it is non-moto. It does not form spores. When found in the blood of patients having a septi caemic variety, many of them possess a distinct capsule. The organism may be stained with any of the aniline dyes, but does not take grams stain. It stains distinctly by polar, leaving an unstained intra-polar portion.

The organism grows on many of the culture media on some few it has characteristic features. On blood serum at body temperature. In twenty-four to forty-eight hours an abundant moist yellowish gray growth occurs with liquo faction of the medium.

On glycerine agar small yellowish white colonies appear. On plain agar the colonies are bluish or translucent. In plain boullion the media remain clear, a fine granular growth occurring on the sides and bottom of a tube form. If over the surface of plain bouillion cocoanut oil be floated fine stalactite growths occur beneath the oil, which when shaken break and fall to the bottom of the glass.

The organism grows best at thirty-six to thirty-nine degrees centegrade. The baccillus lives from four to seven days in the putrefying organs of man and animals. Its virulence is retained in the cadaver of rats for two months, penetrating all the tissues of its body, even extending through the skin. It lives in the pus of the bobos from ten to twelve days, in sputum ten days, in various foods, as milk and potato, from one to three weeks. In the earth it lives from two to three months, depending on the quantity of organic matter.

The higher the temperature above thirty degrees centegrade the more numerous the sapro phitic organisms, the shorter the life of the pest bacillus.

Its resistance to dessicated sunlight at a temperature to twenty-nine to thirty degrees centegrade when dry rarely ever persists past a period of from six to seven days. It lives longer on cotton and woolen fibre than in dust.

Sunlight direct kills the organism in from two to six hours. A temperature of sixty-five degrees centegrade providing the heat is evenly distributed kills them in about one hour. They are killed at a hundred degrees centegrade at once. Eighty degrees in five to ten minutes if moisture is present. They are very resistent to cold, remaining alive at twenty degrees centegrade for several weeks, even though they be repeatedly thawn out during this time. At a temperature from four to seven degrees, they are not killed but grow slowly.

Milk of lime, I to 1000 bi-chloride, I to 500 carbolic acid, I to 1000 lysol kills them in about three hours.

The disease may be communicated to rats, mice, guinea pigs, rabbits, calves, swine, monkeys and pigeons, not only do these animals contract the disease by inoculation, but when fed on cultures of plague bacilli or materials containing the organism. Few instances are on

record on intentional or unintentional inoculation in man. Whyte in 1882 communicated the disease to himself and died. In 1835 at Cairo two condemned criminals were inoculated, both contracted the disease but recovered.

Yersen demonstrated by putting mice in separate compartments of a cage along with inoculated mice that the disease could be transmitted through the air. He, in his Hongkong laboratory also discovered a large mortality among his flies. In the flies pure cultures of the organisms were found.

We therefore find that man may be inoculated in the following ways: First, through contaminated food, infected either by flies, rats, mice and smaller insects. Second, through contamination of water supplies, usually from the discharges of plague patients. Third, from the inhalation of plague laden material. Fourthly, by direct inoculation through abrasions of the skin or from the bites of insects.

Since we find the infection taking place in three different ways, that is, the skin, the intestines infected and through the lungs, we find three distinct types of pathological processes in man traveling under the name of one disease. The three types are first the pneumonic type coming through the inhalation of infected material, second, the septic cemia type by way of the intestinal tract, the bubonic type, by way of the skin.

Between eighty and ninety per cent. of all cases of plague are of the latter or the bubonic variety. Of these seventy per cent. of the primary bubo or bubos form in the groin, most frequently on the right side, infecting the femoral glands more often than the inguinal.

This fact alone speaks strongly in proof that the most common route for the infection is through the skin, resulting from the bites of insects. In

twenty per cent. of the cases the adenitis is situated in the axelary glands, and in ten per cent. the glands under the lower jaw. This group being found almost exclusively in children.

The inguinal adenitis is mostly singular, only in about eight per cent. of the cases do they occur simultaneously on both sides.

The popliteal and epitrochlear and those at the root of the neck seldom become involved. The adenitis may, however, occur at different parts of the body at the same time.

In the early stages of the disease many baccilli are found in the lymph spaces around the follicles, later they are found in the follicles themselves.

The lymphatic channels may be extensively involved before any perceptible enlargemment of the glands can be made out. There next occurs an intense hyperaemia around the gland as well as in it, with a marked tendency to hemorrhages. On section the gland shows extensive cellular hyperplasia. The glands may become quite large, the cut surface is moist, the moisture consisting of a vellowish serous fluid composed of plasma leucocytes and bacteria. The gland is pinkish or red color. Later the central portion of the gland will be seen to undergo coagulation necrosis and suppuration, owing to secondary infection with streptococci and staphylo cocci. The tissues overlying the gland undergo necrosis and oftentimes extensive gangrene. If the patient recovers healing takes place very slowly. The general appearance of necropsy of a patient dying of plague is that of enlargement and hemorrhage. Nearly all of the organs of the body participating more or less. In cases of longer standing extensive parenchymatous changes are seen. In the brain and spinal cord marked congestion is noted with a perceptible increase in the subarachnoidal and ventricular fluid. On section numerous and, pronounced peticchul hemorrhages are seen and occasionally considerable extravisation of blood into the brain substance occurs, especially in the medalla oblongata.

Ecchymoses are common into all the serous surfaces. The serous cavities often contain large amounts of sanguinous exudate. Extensive hemorrhages are seen in the media stinum. trachia, bowels, peritoneum, pelvis of the kidney, uretis and bladder. lungs show bronchitis and hypo static pneumonia. The heart and vessels contain dark feebly clotted blood. The spleen enlarges to two or three times its normal size. The liver is markedly congested ofttimes showing swelling. The entire gastro intestinal mucosa show punctate hemorrhages even erosions and ulceration around the ilio aelel valve. The kidneys show extensive hemorrhagic extravasations into its parenchima with swelling and desquomation of its epithileal structires. Cutanaeus hemorrhages often extensive and numerous. occur in the skin and beneath it. There may be also on the surface numerous furunceles and postules.

Rigor mortis is moderate, post-mortem muscular contractions also post-mortem rise in temperature is common. Decomposition takes place early.

In the septicemic variety or so-called pestis siderans there are no special enlargements of the lymphatic glands during life, but at death the glands throughout the body are found to be slightly enlarged, especially those of the mesenteric and retroperitoneal groups. The high degree of virulence and rapid course of the disease depends upon the entrance of large numbers of bacilli into the blood. Frequently in this type death is due to hemorrhage.

The pneumonic form shows no mark, deviation from the ordinary changes in a pneumonitis save that the process is a very rapid one and is associated in its beginning with extensive hemorrhages into the aveli. Hemoptisis is one of the first signs; patients usually die on the fourth or fifth day.

PLAGUE: ITS SYMPTOMATOLOGY.*

BY L. M. FOWERS, M.D., LOS ANGELES, CITY HEALTH OFFICER.

The forms of plague may be bubonic, septicemic or pneumonic, and we may speak without particular regard to form of pestis major and minor, depending upon intensity or mildness of the disease. The incubation period seems to be from twenty-four hours to eight days, but much longer periods have been reported. Simons reports the observations made in a detention camp in which 3975 persons were admitted, and of these 115 were attacked as follows:

1st 2nd 3rd 4th 5th 6th Day Day Day Day Day Day 11 15 22 19 13 10

7th 8th 9th 10th 11th Day Day Day Day Day 6 5 7 2 2

There is a question as to the time of exposure, whether it was prior to admission or later. Jackson in "Tropical Medicine" states that the incubation stage varies from a few hours in rare fulminating cases to ten days, and the average period may be said to be from two to eight days, and that as long an incibation period as fifteen days has been assigned to the disease by some writers, but there seems little warrant for this teaching. It is claimed that the incubative period is practically the same for all types of the disease.

THE PRODROMIC STAGE.

There may be a total absence of any premonitory symptoms. Whenever there are any they last a very few hours or may extend over a period of a day or two, the patient feeling dull, some headache, and generally vertigo, loses appetite, and may have some nausea or vomiting. Sometimes diarrhoea occurs at this stage with slight tenderness over

the region of the inguinal or axilliary glands.

INVASION.

The invasion is generally sudden, and is rapidly followed by grave systemic disturbances such as initiatory chi!1, mental and physical prostration, severe headache, vomiting and diarrhoea. These symptoms may last for a few hours or several days until the fastidium is reached, but generally the fastidium is established on the second day when the severe headaches, aching and cramps in the limbs, nausea, vomiting and extreme vertigo continues with a rapid rise of temperature in thirty-six or forty-eight hours to 103, 104, or even 105 Fahrenheit. This high temperature may last for four or five days, and then drop to 100, or, possibly, nearly normal, which may be followed by a rise and fall of temperature at different times, depending upon the complications or conditions. The pulse soon becomes rapid and compressible, with marked weakness of the heart, pupils are dilated, the conjunctiva markedly injected, the skin is hot and dry, and in severe epidemics more marked than in others. In many cases the petichine appear over the chest. neck, face and other parts of the body, and, in the severe forms, hemorrhages into the skin sometimes resembling purpura.

While in San Francisco my attention was called by Dr. O'Neil, who was in charge of the plague tents, to the marked dermography manifested in many of the cases. In severe cases there may be hemorrhagic extravasations in the skin with hemorrhage from the stomach, bowels, etc. This form gave rise to the designation "Black Death." The tongue in first coated with white fur, but later becomes brown, dry and swollen, with sordies on the teeth. The voice becomes weak, the mouth is dry.

^{*}Read before Southern California Public Health Association, Riverside, Cal., December 2, 1907.

and the patient very thirsty. Marked mental lassitude is manifested early; delirium convulsions or coma may appear in the course of the disease, or a typhoid condition may develope with or without delirum. Often there is but one primary bubo, but later more may develope as the lymphatic system becomes more involved. The inguinal and crural glands are the most often affected, next the axilliary and cervical. The buboes generally reach their greatest size in from one to four days, and are accompanied with severe pain which may subside, but if suppuration should take place the pains persist. Suppuration and rupture may not occur. If suppuration and rupture should occur, or if incision be performed the process is generally slow to heal, and is often followed by complicating septic intoxications. The urine may contain albumen and hyaline casts during the febrile course of the disease. Pregnant women almost invariably abort during an attack of the plague. It is impossible to state any average duration of this disease for renewed infections and complications are so common. Death may occur at any stage of the disease. Convalescence marked by a crisis and is very slow in severe cases. Recovery is then an anxious period of several weeks with slight and irregular febrile The mind and body are movements. 'slow in recovering their normal functions. Convalescence may be protracted by complications such as nephritis changes, eye and ear troubles, nervous disturbances, ulcerations of the blood vessels, and periostitis.

THE SEPTICEMIC FORM.

The septicemic form is due to the invasion of the plague bacilli in great numbers into the blood, and the absence of bubo formation or any very particular local manifestation in the early stages of the disease. This is generally the severest form, and is often

characterized by sudden onset, intense toxemia, profound nervous depression, involuntary bowel movements, epistaxis, hematuria and hematmeni (?), intestinal hemorrhages, and the appearance of a severe purpura hemorrhagia. Of the patients attacked by this form a very particular local manifestation in the day by multiple buboes formingg in the large percentage die in the early stage, and in the severest form of this disease death is inevitable as the power of reaction is totally absent in such cases. In many instances in the mild forms a reaction takes place, and a bubonic type supervenes on the fourth or fifth day by multiple buboes forming in the glands of the groin, axilla or elsewhere, or a pneumonia may develop.

PNEUMONIC PLAGUE,

Ordinarily the pulmonary symptoms develop within the first twenty-four hours, but may be delayed for two or three days, the onset and invasion being similar, but more sudden and rapid than the bubonic form. A sense of constriction of, the chest with rapid and painful breathing, rusty or frothy bloodstreaked sputum; the temperature is high with physical signs of lobular preumonia. This form is very fatal, and. I may add here, dangerous to the public health because of the great number of bacilli thrown off in the sputum.

PESTIS MAJOR.

may include any form of plague that is extremely intense in virulence, or it may combine some or all of the symptoms found in the different forms and which terminates fatally in a very short time.

PESTES MINCR.

or mild plague may show no symptoms more than fever, general malaise, and little or no depression, and runs a short course, and, if a bubo forms, the same takes on resolution and disappearance. Such cases are never diagnosed except when they occur in plague districts already under medical observation.

DIAGNOSIS.

A clinical diagnosis is not very difficult in the glandular or bubonic form of plague, especially when the disease is fully developed, showing a bubo or buboes, and high fever, headache, pain in the limbs, the facial expressions, the extreme lassitude or weakness, and well marked nervous prostration or disturbance. A bubo in the groin may be mistaken for a venereal bubo, but there is a difference in the contour in consequence of the infiltration of the neighboring tissue, extreme pain on pressure, and the acuteness of the plague bubo. Buboes located in the axilliary space or neck may be confounded with any form of adenitis, but, with care, may be differentiated from the latter by the constitutional disturbances, the rapid development; and, best and surest of all means, a bacteriological examination of the serum from the infected glands, and the inoculation of a guinea pig or rat, for sometimes the smears from the involved tissues do not show the plague bacilli even in true plague. In fact the initial bubo or püştirlé should always be subjected to careful bacteriologicals examination. The septicensic form may be mistaken for typhoid fever, malarial fever or any of the acute septicemia, and the only means of differentiation is a bacteriological examination of the blood.

The pneumonic form may be taken for croupous pneumonia from which it may be distinguished by the lack of harmony existing at the beginning between the severity of the general condition and the condition of the lung as shown by physical signs, and again there is but one means of making a correct diagnosis, and that is a bacteriological examination of the sputum which generally contains numerous plague bacilli. There is no definite means of making a positive diagnosis of pestis minor because of the absence of bacteriological evidence.

All suspected cases should be subjected to thorough bacteriological examination, and tests made upon live animals.

THE TREATMENT.

The treatment of plague has not been satisfactory, as in every epidemic disease what seems to have been beneficial in one epidemic proves to be of no value in another. Much has been expected of the serum treatment for plague, but so far it seems to have reached the experimental stage only. Yet we hope for success in the serum treatment as it is based upon rational theories, and seems tenable. The administration of drugs destructive of the plague bacillus with a view of destroying the bacilli or toxins in the circulating blood has been unsuccessful although Dr. J. C. Thomson, in a report on Plague cases treated in the Kennedy Town Hospital, Hong Kong, in 1903, states that he administered carbolic acid in twelve grain doses in orange syrup and chloroform water-every two hours, and that as much as 2500 grains were given to one pathent before the bacilli disappeared with no poisoning except carboluria occasionally. When carbolugia appeared a dose or two of carbolic acid was omitted, and the urine became clear. Dr. Thomson's experiments showed favorable results, but being in the latter half of an epidemic where the disease had assumed a mild form do not prove positive results. As the serum and antiseptic treatments have not been satisfactory we have to resort to systemic treatment by drugs, hygenic surroundings and nursing. The drugs usually employed are calomel with a saline aperient. To support the heart and prevent collapse digitalis, strophanthus, camphor, ammonia, nitroglycerine, and strychnine. To control pain the opiates are used, of these morphine hypodermically is, perhaps, the best. The bromides may be used with advantage in some cases. In diarrhea the intestinal antiseptics are valuable. Care

ful and supporting diet should be looked to at all times with tonics such as iron and the bitter tonics, bathing and cold packs to the head, etc.

"The surgical treatment of plague includes the treatment of buboes and of the so-called "carbuncles." It may also include the checking of hemorrhage extensive suppurative conditions. Whether or not the bubo should be extirpated has long been a disputed question of treatment. The weight of opinion seems to be favorable to noninterference prior to suppuration, upon which occurrence incision should be performed. In support of this teaching is the fact that other glands beyond the primary first-order bubo are almost invariably invaded before the initial bubo is sufficiently developed to suggest extirpation. This being the case, removal of the initial bubonic gland would not remove the infection, while complete removal of the involved chain of glands would seldom be possible. Exceptionally, in a small, well-localized group of glands, extirpation might be a good practice. Ice bags applied to the inflamed and tender bubo may mitigate the pain but hot antiseptic poultices or hot anodyne applications probably hasten suppuration and the time for incision. Free incision into the bubo, with drainage with gauze wicks or otherwise, should be made when evidences of pus are present. Antiseptic dressings should then be applied and frequently changed so long as suppuration persists.

Treatment of the plague "carbuncle" so-called, consists in the application of antiseptic, absorbent dressings, moist by preference, and the removal of the slough. In exceptional cases the infected skin area and the tissues beneath may be excised. If this be deemed available the electro-cautery knife might be used advantageously, the cautery knife sealing the lympth vessels and blood vessels as it divides them."

THE PLAGUE: ITS PREVENTION.*

BY RUPERT BLUE, M.D., SAN FRANCISCO, CAL., PAST ASSISTANT SURGEON PUBLIC HEALTH
AND MARINE HOSPITAL SERVICE.

You have complimented me with a place on this evening's program and I wish to thank you for this opportunity to be with the Southern California League for the Study and Prevention of Tuberculosis. While it may seem to you a "far cry" from tuberculosis to bubonic plague, I have only to remind you that the one is the "black plague" while the other is the "great white plague."

I hope you will pardon me if I have a good deal to say about the rat for while this may grate up the nerves of some of my fair listeners, I assure you that the rat is the crux of the entire problem of bubonic plague. This disease is essentially an affection of rats often transmitted to man in whom it is generally fatal. It is an example of that great class of epizootic diseases which are mechanically transmissable to man and of which tick fever, glanders, tuberculosis and hydrophobia form good analogies.

Let us first then, consider the disease as it exists in the rat that we may better understand its manifestation in man and the means to be adopted to control its spread.

The disease receives its name from the swellings or bub es in the lymphatic glands, but this is not the only form of the disease, for it also attacks the

^{*}Read before the Southern California Anti-Tuberculosis League, Riverside, Cal., December 2, 1907.

lungs producing a pneumonia, or the bacteria may exist in such numbers in the blood that we have a septicaemia or blood poisoning with the bacillus which causes the disease. These forms exist alike in rats and men, but the rat also has a chronic form of the disease in which they are walking distributors of the bacilli

The disease spreads among rats in various ways. The fact, that most of the infected rats present enlargements of the glands beneath the tongue indicates that the disease has been contracted by eating a carcass of some comrade who has died of plague. A well rat is rather careful in his toilet and can protect himself from fleas, but should he fall ill of plague he is at the mercy of these pests which attack him in hordes and gorge themselves with the infected blood. A flea will only remain where it finds warmth and food, and as a dead rat can furnish neither this ubiquitous insect chooses as its next abode the first warm-blooded animal which comes along. It usually is another rat, but it may be you, and should the flea bite you or should you mash him upon your body you are liable to fall ill of plague within a few days. Here we have one of the means of the spread of both human and rat plague.

Rats as we know them are domestic animals in that they are generally found in and about the homes of man. They follow his lines of travel and rarely migrate long distances except when mechanically transferred in ships or railway trains. It is therefore entirely within our power to exterminate this useless animal which annually destroys enough to feed the nation and is a constant menace to the health of our people. Some thoughtless persons, moved by a misdirected sentiment, have entered a plea for the rat on the ground that he is a four-footed scavenger. We have long since ceased to require this mediaeval method of disposing of our

refuse and modern man has placed the work of destroying our garbage in the hands of public officials who are employed for this specific purpose.

From the foregoing it is apparent that man should defend his home against the rat which is gnawing at the vitals of the nation. This is accomplished by concreting the basements, and closing or screening all openings through which the rat could find entrance to the house. The sewers are a favorite abiding place of the rat, and the ancient brick and mortar affair presents many holes through which he can enter human premises. All of these should be closed or modern concrete or vitrified clay pipes substituted for the sewer which had its origin in remote times. The rat is to be further attacked by traps and poisons. In San Francisco we are using both the wire cage and snap traps. For baits, smoked fish, cheese, fresh fruits, or vegetables, are all good. We have tried various poisons, but the best results have been obtained from phosphorus or arsenic made into a paste, or what is known as Danysz virus. This latter consists of a culture of a bacterium which is harmless to all animals except rats and mice, in whom it produces what is known as mouse typhoid. The organism which is called the bacillus typhi murium is grown in alkaline bouillon for six days at room temperature. It is then mixed with some palatable breakfast food or vellow corn meal and placed in rat holes or The bacillus rapidly loses its activity, especially when exposed to light. The cultures should therefore be spread at frequent intervals. As it is quite harmless to man it may be placed anywhere in the house. Much that has been said of the rat applies to the ground squirrel, and there is no better work in which the general public can cooperate with the health authorities than in carrying on an active campaign against the rat family. In fact, in plague

times, this is a civic duty of the highest order and it behooves every citizen to exterminate these pests upon his premises and to render his home vermin-proof. It is not only important that the home of the rat be made untenable but his food supply must be forever cut off. Household garbage should not be exposed but should be kept in metal cans having a tight fitting cover. As much refuse as possible should be incinerated and the remainder so disposed of as to be inaccessible to rats.

Stables, furnishing as they do a convenient abode and a bounteous food supply for rats, are particularly dangerous. It is therefore necessary that they be concreted, connected with the sewers and supplied with a metal container for grain and a tight manure bin. Bakeries, junkshops and warehouses should be similarly rendered rat-proof and rat-free.

In view of the danger of shipping plague-infected rats in freight, piers and warehouses should be so constructed that the goods stored therein are inaccessible to rats. This may be accomplished by surrounding the freight with tight metal fences and placing inverted funnels on the joists and rafters.

When there is a suspicion that plague may exist in a community it becomes the duty of the health authorities to institute a search for the disease and inquire into the sanitary conditions of their district. The individual householder can do much to assist in this by allowing the free inspection of his premises and by accepting the suggestions for sanitary improvements as made by the inspector. Careful search should be made for rat cadavers and a bacteriological examination made of each. Should plague-infected rats be discovered the neighborhood is to be treated exactly as if a case of human plague had been found therein.

Persons suffering from plague must be isolated. The pneumonic form is the most contagious but all forms are more or less dangerous to those exposed. Contacts are to be kept under observation for eight days. doubt exists as to the diagnosis some physician competent to settle the question should be called in. Should a positive diagnosis be made the house should be thoroughly fumigated and disinfected and a careful search made for the bodies of rats dead of plague. Those exposed should be immunized with Haffkine's prophylactic or Yersin's serum. The former consists of a dead culture of the bacillus pestis, the causa tive agent in plague. The latter is prepared similarly to diphtheria antitoxin

There is no more important measure in the eradication of plague than the careful examination of all human corpses. While we all shrink from having the bodies of our beloved dead viewed by an outsider, it is necessary for the protection of the living that the diagnosis be accurately made in every case and we should sacrifice our personal feelings to the public weal.

Plague is an insidious disease and will deceive even the most expert. Once fastened on a community its development is slow but under suitable conditions it gains a firm foothold and its eradication may mean the labor of years and the expenditure of millions.

A little five-year-old daughter of Dr Pickens Taylor, of Georgia, was taken down with a spell of intermittent. It became necessary to administer quinine, which he did in the form of small capsules. In order to induce her to take them he told her that they were "little humming-birds' eggs, and were very nice." When the quinine had taken effect, she told her father, with great glee, that the little birds had hatched, and were singing in her head.—Doctor's Recreation Series.

DEPARTMENTAL

DEPARTMENT OF DISEASES OF WOMEN AND CHILDREN.

BY WILLIAM A. EDWARDS, M.D., EDITOR.

EDITORIAL COMMENT.

Some Further Points in Infant Feeding.

We all recognize that the proteid contents of cow's milk is too high for the infant's stomach to digest, so that we advise starting very young babies on a low proteid and fat formula. It must be understood that as many, perhaps more, dangers arise from continuing a too low proteid too long as from using a too high proteid too soon. It would seem that we have perhaps gone a little too far in feeding mixtures that are too dilute.

The normal breast-fed infant is a distinct and easily recognizable type; it is, as it were, our unit for comparison and standardization. For comparison we have the baby fed on proprietary foods, the condensed milk baby and the cow's milk type. All these are very characteristic subdivisions to those who are studying these matters.

Condensed milk babies appear fat, but are usually under weight, are always rachitic, anaemic and have the bluishwhite appearance that is almost pathognomonic. The proprietary-food baby will show more or less atrophy, be under weight, sometimes to an extreme degree, and suffer from iliocolitis or simple indigestion, sometimes from the intractable indigestion of infancy. The cow's milk baby will closely resemble the breast-fed infant; perhaps it will weigh a little less, but their flesh will be hard and their skin of good color, the teeth will erupt normally and their resistance to disease will be equal to the breast-fed baby, if their formulas have been correct. It is just here that the point of these remarks arises. We cannot too strongly urge the absolute necessity of supplying a formula for each baby and not placing it on a certain combination because another baby has thriven on it.

The matter of "low proteids" requires most careful consideration primarily because the proteids of cow's milk are much harder to digest than those of mother's milk. So that if we make the proteids of cow's milk very low the baby will get little if any nourishment. It has come to be believed by some of us that we need a higher proteid in the formula than that of mother's milk, but we must feel our way and not determine at once the proteid content until we know just what the baby's digestive abilities are. Undoubtedly some babies, indeed many babies after the third month can digest and thrive on 1.8% or 2% of cow's milk proteids.

The so-called "difficult feeding cases" are, however, a much more involved matter of adjustment, if we give them only the low proteids that they seem able to digest they will not develop normally, will be constipated, fretful, poor sleepers, anaemic, under weight and gain little, show a susceptibility to acute infections or enteritis and possibly undergo infantile atrophy. We may thus feed these children who are classed as difficult cases under the plans: 1st. A proteid formula so low that the feeble digestive powers can handle it, and thus gradually try to increase the digestive functions. But it is a slow, disappointing process. 2nd. A formula appropriate to the child's age, that is start a baby for the first three months on fat 3%, sugar 6%. proteid 1.5%, and use 4% fat, sugar 6% with proteids of the

following proportions, 1.8% up to six months, 2% up to nine months, 3% up to twelve months, and whole milk after the first year has elapsed. This is what has been called "sthenic" feeding and if used carefully with experienced judgment is by far the best method of feeding children. It is necessary, however, to make a success of this method, to secure clean milk, certified milk, which at present does not exist in the state of California. In order to start these children on the larger proteid content we may be obliged for a short time to predigest the milk or to give pepsin or pancreatin with each feeding. Cereal diluents, barley water, seem also to aid in the digestion of proteids.

If it is possible to use raw milk much will be gained, as heating undoubtedly produces a chemical change in the milk, converts some of the sugar into carame and renders the proteids less digestible, and the albuminoids insoluble. It also affects the salts, especially those necessary to the bone tissues, and destroys the natural digestive ferments of the milk.

All recent studies have clearly shown that next to maternal milk normal clean milk, which is sterile, is the best alimentation for infants, children and in fact for old people.

Also has it been shown that breast milk contains ferments that account for its more ready digestion in the infant's stomach. A child will digest cow's milk better if it can have one or two breast feedings in the twenty-four hours. Premature and marasmic babies are devoid of digestive ferments in the intestinal can's.

The French have demonstrated the presence of diastatic ferment in breast milk and they have not found it in cow's milk, but a saponifying ferment exists in both the woman's milk and the cow's milk, less active in the latter; an amylolytic ferment is also active in breast

milk but absent in cow's milk. The statement that woman's milk contains tripsin and pepsin ferments has not as yet been fully accepted.

In a word it would seem that the milk of omnivorous animals—women and dogs—contains active ferments and that the milk of herbivorous animals contains all the ferments except the amylolytic and salol-splitting, but that they are all less active.

The Italians have shown us that it may be possible to change the ferments in cow's and goat's milk by selective feeding, and that the cow's milk may be made to contain, in addition to its usual ferments, the amylolitic ferment and the salol-splitting ferments.

A knowledge of the effect of heat on the ferments is of the greatest practical importance,

The salol-splitting ferment (found only in woman's milk) is weakened at 55° C. (131° F.) and destroyed at 65° C. (149° F.).

The amylolitic ferment (found only in woman's milk) is weakened at 70° C. (158° F.), and destroyed at 75° C. (167° F.).

The fat-splitting ferment (in woman's and cow's milk) is weakened at 63° C. (145° F.), and destroyed at 64° C. (147° F.).

The oxidizing ferment is destroyed at 76° C. for one minute.

The proteolytic ferment is destroyed by boiling.

The bactericidal contamination and the alexius are weakened by 65° C. (149° F.) for one-half hour and destroyed at 85° C. (185° F.) for two minutes.

Lactoserum is uninjured by 120° C. (248° F.) for an hour.

It is evident therefore that a temperature of 60° C. (140° F.) is the desirable one for pasteurizing infants' food. It will not alter the chemical constituents or destroy the ferments and if the

milk is fairly clean and the tubercle bacilli are not coated with mucous or a protecting film on the surface, they will be destroyed if this temperature is maintained for forty minutes.

It is then unaltered and retains all its ferments and retains all its biologic characteristics, and in Los Angeles at the present time it is the only safe method of feeding babies, safe because it is clean and safe because it will not produce rickets or scurvy and will supply a cow's milk when properly modified, as near mother's milk as may be.

I am often asked as to the advisability of feeding children on goat's milk. There is a great deal to be said in favor of this, first because the goat is practically free from tuberculosis and while we cannot endorse the statement of Behring that all tuberculosis, even that of young adults, originates from milk feeding in infancy, still the known prevalence of tuberculosis among cows is a frightful menace to the human race and the use of the milk from an animal that would guarantee freedom from tuberculosis is a great desideratum. Again. goat's milk is half again as rich as cow's milk and each goat will produce a half of a ton of milk a year, showing how a very valuable little animal has been greatly neglected in America and a valuable source of family food supply entirely overlooked. So small is the milch-goat that it may be washed and dried in a very short time and thus be kept perfectly clean.

The introduction of whey into infant feeding has given us a valuable means of meeting certain of these "difficult feeding" cases. Familiarity with the constituents of whey will show at a glance how valuable it may become in modifying milk. It may be made from whole milk or from fat-free milk. An average analysis of the former is: proteids 0.9, fat 0.96, sugar 5.49, salts 0.48, water 92.13. If made from fat-free

milk the proteids will be 1.17 % and the fat only 0.04 %. The proteids of whey include the lactalbumin and the lactoprotein.

Whey may be made at home by adding a tablespoonful of rennet to a quart of milk, mixed thoroughly and allowed to stand until separation occurs into a liquid and a curd. This curd is to be thoroughly broken up and the whole strained through cheesecloth. however, is not ready for use in a milk modification until the rennin of the rennet has been destroyed. To do this bring the whey to a temperature of 75° C. (167° F.) and maintain it there for thirty minutes. This gives us an exceedingly valuable food for a fevdays in babies suffering from enteritis or chronic enteric catarrh, containing as it does the liquid proteids with salts and water. It is acid, but may be sweetened with sugar if the child objects to it. In our hands it is far superior to the much-used albumin water. Its great advantage, however, is in modifying cow's milk. When we modify cow's milk we still have left a casein which is not present in the proportion to the lactalbumin as in breast milk, but by separating the liquid proteids from the casein and re-combining them this difference is overcome. We must remember that in cow's milk there is 5-6 of casein to 1-6 of lactalbumin and lactoglobulin, but that human milk contains 2-6 of caseinogin and 4-6 of lactalbumin and lactoglobulin and the great advantage of whey becomes apparent at once. With whey we may obtain mixtures which are relatively and actually as near breast milk as it is possible for human endeavor to make them.

In whey we have all the soluble proteids, in highly concentrated cream we have the fat and from skim-milk we obtain the caseinogin.

The only disadvantage in the method is the difficulty of its practical applica-

tion both at home and in the laboratory. Unless prepared with extreme care the whey will cause the modified milk to curdle when warmed for the baby s feeding. It is not generally used because physicians as a class seem slow to adopt percentage feeding and slower to recognize the great value of whey modification.

Personally I see very few children who require such ultra-scientific modification of milk; as a rule children do better on the ordinary modifications, but there are a few children who can only be fed with any success by some of the whey modifications.

TREATMENT OF DISEASES OF CHILDREN. Treatment of the Diseases of Children. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Octavo volume of 597 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.00 net; Half Morocco, \$6.50 net. For sale by Fowler Brothers: W. B. Saunders Company, Philadelphia and London.

Kerley treats each child as an individual and not as a case with inflexible routine. While the book is devoted mainly to treatment, still enough symptoms, etiology and complications are given to point the therapeutic indication.

The chapter on general considerations is one of the most valuable in the book. Of course in this country we do not need to regard Kerley's caution about the indiscriminate airing of children out of doors in unfavorable weather. Many of the diseases of children are best treated in Southern California by a continuous residence in the open, day and night.

We wish emphatically to endorse the author's judgment in leaving out the "normal weight" line in the weight charts. We have seen many an unhappy mother strive to keep up this standard which was not normal for her particular child.

We have never been in favor of incubators for premature infants or weaklings and are glad to know that the author agrees with us. He advises the use of the electric heating pad between blankets under the child, and the sug gestion is a valuable one.

Kerley thinks that it is a just criticism of the average American that he is afraid of fresh air, not only by night but by day, and he has found it one of the most difficult features of a child's management with which he has had to deal. So have I; the stumbling-block is the open window. We hope some day to quiet the fears of the masses regarding the dangers of outdoor life.

The section on infant feeding is excellent and timely and the advice about a nursing mother is good, particularly when he advises the same diet for the nursing mother as she used before pregnancy; there is a deal of nonsense still to be eliminated in the diet of a nursing mother. The suggestion to give one bottle feeding daily to the nursing child in order that it may be provided for in case of the temporary absence or sickness of the mother is in accord with the newer teaching.

It is impossible to endorse the dictum in intussusception that an attempt at reduction by water pressure should be made before resorting to surgery; delay is too dangerous.

We are pleased to note the elimina tion of "stomach cough" and "nervous cough" and the like and to find that the author refers them all to the respira tory tract.

The chapter on the urine is practical and valuable.

Colon flushing for suppression of the urine cannot be too fully commended. It is one of the most valuable aids for this serious symptom in children.

We are hardly prepared to endorse the dictum that circumcision in the second week of life is to be advocated as a routine measure. Most children need circumcision, all do not.

We are disappointed in the extreme limitations of the chapter on the female genitals, but two scant pages are devoted to simple vulvo-vaginitis and gonorrhoeal type. Certainly there is more than this to be said of the female Kerley is wise to consider genitals. the treatment of hysteria; it is very prevalent and demands our careful care and thought, "we must bear in mind that a child that in addition to being born of an hysterical mother, is hereafter in constant association with her. A neurotic hysterical mother puts the whole family in a state of tension. A neurotic irritable father will make the whole family neurotic."

When considering infantile tetany the author makes a valuable suggestion in that many of the infants who develop tetany have been on a low proteid diet, perhaps famished by the proprietary foods and condensed milk. Some infants have a low proteid capacity. In feeding these cases look carefully into the proteid digestion and the proteid supply. In these children raw milk is preferable. "An outdoor life in the country with open windows at night are necessary for rapid relief."

Kerley's treatment of primary hereditary syphilis by the internal administration of bichloride of mercury is in accordance with all our views, he rarely finds it necessary to use inunctions.

The dose of quinine recommended by the author for malarial fever in children seems extraordinary to us, although we had the honor of being graduated by the brilliant and versatile Horatio C. Wood, than whom there was no more fearless therapeutists. From 15 to 30 grains of quinine can in our experience rarely if ever be given to children from two to six years of age without unhappy results.

Kerley has made some original studies in the temperature of children and in studying 133 children, from birth to the eighteenth month, whose temperatures were taken several hundred times, it would seem that a daily rise above 99.5 F. must be considered normal. This we have taught our classes to consider as the normal range in children, for many years, since Keating and myself made similar studies in 180 children in the Philadelphia Hospital in 1832-3.

The most annoying cases, truly, are those that come to us with an elevation of temperature for which no adequate cause can be discovered. It is well then to remember the studies of Kerley, Keating and myself.

An illustrated section on Gymnastic Therapeutics is included in order to call the attention of general practitioners to the value of such work and to assist them in applying necessary treatment. It is an extremely valuable exposition of the exercises to be used therapeutically in children in the treatment of flattened or narrow thorax, kyphosis, scoliosis, flat foot, congenital ataxias and acute anterior polio-myelitis.

Many practitioners will find this book to be a very valuable reference book in time of need, particularly if the time is limited and they wish a clear, concise statement of the subject matter.

W. A. E.

Dr. Edlefsen, the author, who has had considerable experience in the treatment of cerebrospinal meningitis with sodium iodide, regards this remedy as superior to the potassium preparations of iodine for the purpose. He aims at the prevention of the serious sequelae of cerebrospinal meningitis by means of the iodide treatment. Potassium bromide is administered to prevent the convulsions, and ice is applied to the head and nape of the neck. Lumbar puncture, and inunction with Crede's silver ointment, are other features in the management of these cases. Sodium iodide also was found useful in the treatment of chronic glandular swellings in the author's experience.—Post-Graduate.



A MEDICAL, CLIMATOLOGICAL, AND SOCIOLOGICAL MONTHLY MAGAZINE,
Established in 1886 by
WALTER LINDLEY, M.D., LL.D., Editor and Publisher.
This journal endeavors to nirror the progress of the profession of California,
Arizona and New Mexico.

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1414 South Hope Street, Los Angeles, California.

EDITORIAL

THE ACTION OF NARCOTICS.

The relationship between the pharmacological action of a drug and its chemical and physical properties has been and is a theme of intense interest to pharmacologist and to biologist.

Perhaps the first investigation regarding this relationship was carried out by Crum-Brown and Fraser of England who found that all organic bases in which the pentavalent nitrogen is connected to carbon with four valances exercise the same pharmacological action regardless of any further difference in their constitution and nature, namely a paralysis of motor nerves.

Another interesting group of substances has been studied similarly, the anaesthetics. Years ago Bibra and Harles expressed their belief that anaesthetics dissolve some of the fatty substance of the brain and thereby induce narcosis, but the relation between fatsolubility and narcotic action was not investigated seriously until recently when Hans Meyer of Austria and Overton of Germany began their laborious researches.

Anaesthetics include substances quite distinct from each other chemically such as alcohols, aldehydes, ketones, ethers and esters, yet all of them possess the common action of depressing the central nervous system. The problem which confronted these investigators was-on which of their common properties is their narcotizing action dependent?

Meyer and Overton argued that if fat solubility is necessary for narcotic action then it should follow that all indifferent fat-soluble substances must act as narcotics if they can enter the

cells, and on the other hand should they lose their fat-soluble property they must become inactive narcotically.

This assumption they have tested even by combining components which in themselves have no narcotic action, but whose combinations are soluble in fat such as the amides of organic acids which are neutral compounds soluble in fat. All of them were found to possess typical narcotic action except carbamide, and carbamide is insoluble in fat.

Another group, the chlorhydrins, which are condensation products of glycerin was studied. These too are soluble in fat and act as narcotics. All of these products are hydrolyzed readily into components insoluble in fat, and when cleavage of this nature takes place their narcotic action is lost.

From these researches of Meyer and Overton it is clear that solubility of an anaesthetic in fat is one of the conditions for narcosis. If it is an essential condition, a quantitative relationship between narcotic power and solubility in fat must exist. This was one of the problems attacked by these investigators. A difficulty in testing this hypothesis lies in the affinity of such substances for the watery fluids of the body, thus introducing another coefficient.

Meyer and Overton realized that the distribution coefficient of narcotics between fatty and watery solutions would constitute the crucial point. With this in view a series of experiments was carried out, the first to determine the least molecular concentration of different narcotics necessary to induce anaesthesia, the second to estimate their dis-

tribution coefficient between water and fat.

Numerous narcotics were subjected to these twofold tests, and a glance at their table of results reveals an almost arithmetical parallelism between the intensity of narcosis produced by any drug and its distribution coefficient.

Since the direct dependence of narcosis upon the physical relationship of the narcotic to the lipoids and watery constituents of the body has been definitely established by these investigations, an explanation of narcosis presents itself clearly, namely, the anaesthetic enters into a loose physioco. chemical combination with the vitally important lecithin, a lipoid, of the cell, and thus changes the relationship of the lipoids to the other cell constituents through which an inhibition of the entire cell chemism results. And it follows that the narcosis must disappear as soon as the loose reversible combination which is dependent upon the solution tension breaks up. And again it must follow, as it does, that substances wholly indifferent chemically, as the volatile saturated hydrocarbons, can act as narcotics.

These findings of Meyer and Overton also explain why all living cells, even plant cells, are depressed by narcotics, since all living cells contain lecithin, a lipoid. Meyer and Overton have made a contribution valuable not only to medicine but to biology.

First Malaria Sufferer—I've got the chills and fever.

Second Malaria Sufferer—Shake!— Bohemian Magazine.

THE DEATH OF NICHOLAS SENN.

January 2nd, died Nicholas Senn, A.M., M.D., LL.D., Professor of Surgery in Rush Medical College and in the University of Chicago, and ex-President of the American Medical Association. Thus closed a career made remarkable by great achievements and by the most tireless activity. Few men in modern times have had careers of such strenuous intensity as his, and perhaps no one has exceeded it—not even the indefatigable head of the nation.

Arriving in Wisconsin at nine years of age—from his birthplace in Switzerland—in eleven years more he was graduated from high school. Unable then, or disinclined, to go to the University, he taught school a little, and was graduated from the Northwestern University Medical School (then the Chicago Medical College) in four years more.

He plunged at once into the work of the profession with an energy that knew no halting for over a third of a century. He soon drifted into surgery and for the last half of his professional life he did little else. He was truly a great surgeon. He was deft as an operator and extremely ingenious in devices and resources. He enjoyed the work and was proud of it.

He showed as a student a quality that characterized him through life—that was thoroughness. He tried to master every subject that he studied. Early he was a phenomenal anatomist—that was the first step toward a great surgeon. Then he mastered the bac-

teriology of that day—that was another step in the same direction.

Although denied a University education his scholarship was broad and ample. He was a lucid and forceful writer, a great teacher of Surgery, and an orator of power. He drove the principles of Surgery into the minds of his students; they could not escape if they would, and they would not. He was even a stickler for precise and correct treminology, as though he might have been a teacher of languages.

During the earlier years, prior to fifteen years ago, and while he lived in Wisconsin, he did a large amount of most creditable research work, which appeared in Medical Journals and in his books, of which he wrote several, notably "Surgical Bacteriology;" "Experimental Surgery;" "Pathology and Surgical Treatment of Tumors;" "Intestinal Surgery;" "Tuberculosis of Bones and Joints;" "Tuberculosis of the Genito-Urinary Organs;" "Principles of Surgery;" "Syllabus of the Practice of Surgery;" "Surgical Notes on Spanish-American War;" and "Medico-Surgical Aspects of the Span ish-American War."

In the later years he has been a great traveler and has written profusely of his experience and observations. In his travels he showed the same intensity that characterized his other activities; he traveled hard and worked as hard in writing his reports. Nearly all his writings were done with his own hand, and he enjoyed nothing better, after a day's work that would have sent most strong men to bed tired

and sleepy, than to sit up two-thirds of the night writing. Even under these circumstances his style was excellent and his manuscripts were singularly free from blemishes.

He enjoyed military surgery and everything that pertained to it; he was Surgeon-General of Wisconsin and later of Illinois; and he held this latter rank at his death and was buried in its full uniform. He was ardent to get into every war that occurred among enlightened nations. When, during our late war with Spain he was given an appointment as Chief Operating Surgeon in the Field, and there was some difficulty in sending him to the front, he told the government that he was going to Santiago if he "had to swim"—and he went.

His gifts to the profession were noble. Years ago he bought an enormous medical library of the estate of a German Professor and gave it to Chicago. It is now the "Senn Collection" in the Crerar Library. He gave the money—some \$75,000—for the Senn Memorial Building of Rush Medical College of the University of Chicago. This building is devoted to clinical work entirely. He made other lesser gifts for a variety of interests.

Senn was a genius—a genius who worked. He was unlike other men. He did not set others to work for new achievements-the achievements were his own. He had few intimates of his own rank; he loved men less than many, he loved work and the doing of it more, and the doing of it himself. He will be remembered less by the warmth of his friendship than by the long list of things accomplished. Like a genius that he was, his work and personality were not always even and uniform, but his purposeful activity was ceaseless, and was a lesson in this sort for the generations to come.

NORMAN BRIDGE.

EDITORIAL NOTES

Dr. T. W. Stone has located in Redondo, Cal.

Dr. A. C. Bowerman has located in El Monte, Los Angeles County, Cal.

Dr. Francisco Vera Becerra has located in Alamos, Sonora, Mexico.

Dr. F. C. E. Sanders, formerly of San Francisco, has now located in Globe, Arizona.

Dr. William H. Palmer of Providence, R. I., is spending the winter in Los Angeles.

Dr. C. H. Bradley of Las Vegas, N. M., has been quite ill but is now able to be around.

Dr. Philip H. Webber, of Redding, Cal., has been visiting friends in Pomona.

A THE WAY WINDS TO SEE THE SECOND

Dr. S. A. Ellis, of Azusa, has been appointed surgeon for the Azusa branch of the Pacific Electric Railway.

Dr. John E. Bacon, of Tombstone, Arizona, has been spending a few days in Los Angeles.

Dr. T. F. Hudson of Phoenix, Ariz., is spending three months with relatives in Cuba.

Dr. J. B. Sands has been elected one of the trustees of Ocean Park, Los Angeles county.

Dr. D. T. Krudop, formerly of Los Angeles, has located in Hollywood.

Dr. Clarence M. Mercer of Eureka, Cal., recently spent a few days in Los Angeles.

Dr. H. H. Purington, of Leviston, Me., has been visiting Dr. A. D. Bowman of Long Beach, Cal.

A large proportion of the olives in Spain are now pickled ripe, but those pickled green are shipped to America.

Dr. E. H. Thompson has established a sanitarium at Burbank, Los Angeles county.

Dr. Earl S. Bullock of Silver City, New Mexico, has been spending a few weeks in Philadelphia.

Dr. George H. Jamison of Castle Springs, Ariz., has been spending a few days in Los Angeles.

Dr. R. P. McReynolds, of the Coulter Building, Los Angeles, was recently elected a member of the Los Angeles County Medical Society.

Dr. C. N. Parsons, of Roswell, N. M., recently delivered a lecture in the School Lyceum Course. His subject was "Nerve and Nerves."

One thousand pounds of coffee per acre at an average cost of 3.1 cents a pound is the report made by one of the leading companies in Brazil.

We have received from the author, Dr. C. H. Hughes of St. Louis, a reprint entitled "A Mistaken Diagnosis of Dementia Senilis."

Dr. W. A. Green, City and County Physician at Douglas, Arizona, who has been very ill, is again able to attend to business.

Dr. J. W. Wood, of Long Beach, has been taking a vacation in Seattle. It is said that his object was to go some place where it was quiet.

Dr. F. H. Hadley, of the H. W. Hellman Bldg., Los Angeles, has been very ill at the Angelus Hospital, but is now able to be about.

The Fourth Annual Meeting of the National Association for the Study and Prevention of Tuberculosis will be held in Chicago, June 5th and 6th, 1907.

The state of Victoria, Australia, produced 2,166 gallons of olive oil in 1906, while the state of South Australia produced 14,750 gallons of oil in 1906.

Dr. J. W. Jones, recently of Orange, Cal., has located in South Pasadena at the northeast corner of Mission Street and Prospect Avenue.

Dr. C. H. Woods, formerly of Pasadena, has now located in Long Beach. Dr. Woods graduated from the Jefferson Medical College in 1896.

The next examination of the California State Board of Medical Examiners will be in San Francisco, April 7, 1968.

Dr. Beck, chief surgeon of the Superior Division of the Canadian Pacific Railway. with headquarters at Port Arthur. Ontario, has just completed a beautiful winter home in Monrovia, Cal.

Assistant Surgeon E. A. Sweet, formerly stationed at El Paso, has been detailed to San Diego, where he will be in charge of the U. S. Marine Hospital Service.

Dr. F. T. V. Fest of Las Vegas, N. M., was recently elected vice-president of the Executive Council of the American International Congress of Tuberculosis

Dr. Robert P. McReynolds of I.os Angeles, formerly surgeon to the Presbyterian Hospital, Philadelphia, is rejoicing over the arrival of a little daughter in his Los Angeles home.

The daily papers say that the Angelus Hospital Association directorate, on December 23, elected the following officers: President. Charles H. Hamilton of Pasadena; vice-president, Joseph Burkhard of Los Angeles; treasurer, Fred Hazzard of Whittier; secretary. Harry T. Hubbard of Los Angeles

Dr. Niel C. Trew of Los Angeles, has been spending some time at Elsinore Hot Springs, seeking relief from blood poisoning. He has returned home greatly improved in health.

Algiers has orchards containing 6,500,000 olive trees. It is estimated that besides these orchards there are in Algiers 5,000,000 wild olive trees, these being grafted by the government.

Dr. Raymond Extone of Phoenix, Ariz., has been visiting his brother in Los Angeles. Dr. Extone has lived in Arizona nearly thirty years, but this is his first visit to California.

Dr. A. B. Turner, County Health Officer of Esmeralda County, Nevada, whose office is in Goldfield, stated that there were only fourteen deaths in that county in November out of a population of 14,000. Now that Funston is there the death rate may increase.

"Tuberculosis a Social Disease and "The Home Treatment of Tuberculosis" are two very interesting reprints by Dr. S. A. Knopf of New York City. There is a wealth of valuable information in these papers.

A camp for the tuberculous has been established at Box Springs, five miles from Riverside, under the medical superintendence of Dr. Geo. E. Tucker. The houses are built on the bungalow tent plan with screen sides.

Tolstoi recently said: "I believe in immortality. What shall I do after death? That I do not know. Whether after death I shall know myself for myself I do not know, but this I know, that I shall go to God."

Dr. E. B. Howe, of Riverside, presented a bill to a Riverside barber, and in reply received a cuspidor on the side of his head. The result was a wound about an inch and a half long penetrating to the bone. The barber says that he is sorry.

Dr. Adelbert Fenyes has recently imported some beautiful carved benches and jardinieres and also a handsome fountain, all made of pure Carrara marble, for the Italian gardens that surround his Pasadena residence.

Dr. Arthur E. Gresham, of Long Beach, died in that city December 30th. He was 42 years old and a member of the Los Angeles County Medical Association and also a member of the Sons of St. George.

We have received from the author, Cornelius Van Zwalenburg, M.D., of Riverside, a reprint from the *Annals of Surgery* for November, 1907, entitled "Strangulation Resulting from Distention of Hollow Viscera."

The Ventura County Medical Association have chosen for their officers for 1908 the following: President, Dr. Chas. Teubner; vice-president, Dr. G. N. Stockwell; secretary-treasurer, Dr. J. C. Bynum.

At a meeting of the Angelus Hospital Association held Dec. 21, 1907, the following directors were elected: C. H. Hamilton, H. G. Hubbard, F. A. Hazzard, Joseph Burkhard, Dr. C. H. Nichols, Dr. Chas. Bryson, Dr. J. H. Seymour.

Drs. F. C. E. Mattison, Geo. H. Kress, W. W. Beckett and Stanley P. Black went to Redlands on the evening of December 20, 1907, and assisted in merging the Redlands Medical Society with the reorganized San Bernardino County Medical Society. Dr. D. C. Strong was elected president, and Dr. A. M. Bennette-Nash secretary.

In the year 1700 the world's annual production of gold was \$7.000.000; in 1800, \$12.000.000; in 1900, \$262.000.000; in 1907, \$425.000.000, and the rate of increase is rapidly accelerating. Yet, remarkable as it may seem, in the face of this flood of gold, One Dollar still secures the Southern California Practitioner for one year.

Dr. J. B. Cutter, surgeon in charge of the Santa Fe Hospital at Albuquerque, has been spending a few days in Los Angeles. Dr. Cutter has accepted the management of the Los Angeles Emergency Hospital and will also be assistant to Dr. E. A. Bryant, Chief Surgeon to the Los Angeles Electric, Pacific Electric and allied railroads.

Dr. E. P. Wallace of Pomona, saved himself from death the day after Christmas by jumping out of his machine just as it was being struck by a Southern Pacific train. His automobile was thrown 50 or 60 feet and smashed to pieces. Fortunately the doctor had that morning taken the hood off of his machine. This gave him the opportunity to jump.

The Medical Sentinel says editorially that "in looking over a list of banks in the country which have closed their doors during the late unpleasantness, we fail to find a single bank which has a medical man upon its board of directors." The editorial goes on to say that it speaks well for the medical profession that while many banks have doctors on their boards, yet not one of those banks have failed.

Many farmers in France have their individual stills from which they produce alcohol of sufficiently high proof to be utilized for light, heat and power. They use principally damaged wine and and the pulp of grapes, apples, prunes and cherries, from which the juice has already been extracted. They also, to some extent, use potatoes and grains for distillation.

Low French Birth-Rate.—The statistics just published by the Official Journal of the Republic show that the birth-rate in France during the year 1906 was the lowest on record. During recent years there has been a steady decline in the number of births and the average yearly figures from 1896 io

1905 were 839,843. In 1906 the births fell to 806,847, while the deaths were 780,196.

Dr. D. Gochenauer, for many years county physician of San Diego county, and founder of the Agnew Sanitarium, has accepted the position of manager of the Angelus Hospital. Trinity street, Los Angeles. Dr. Nichols, who retires from the management of the Angelus, respected by all who know him, will now devote himself exclusively to his private practice.

Dr. W. A. Edwards has just returned with Mrs. Edwards from a great hunt in Lower California. Dr. Edwards has a little side line down in that country consisting of a ranch of 77,000 acres. He has one field of barley of 5000 acres. Mrs. Edwards is a sister of Secretary of War Taft, and joins Dr. Edwards enthusiastically in these hunts, she being an excellent shot.

We have received, with the compliments of the author, a beautiful booklet entitled "The Legend of Spirut Lake," by Charles Fremont Taylor, M.D., editor of the Medical World. Mount St. Helens is in the State of Washington and Spirit Lake is in its shadow. The legend itself is told in poetry and shows the artistic soul of the writer.

Dr. Henry Patterson Loomis of New York City, the only son of the late Professor Alfred L. Loomis, died from pneumonia after a short illness on December 22d in the 49th year of his age. Dr. Loomis, at the time of his death, was professor of Materia Medica, Therapeutics and Clinical Medicine in Cornell University and Medical College. He was noted especially for his writings on pneumonia, the disease that caused his death.

Dr. Guy Cochran, who has for some years been assistant chief surgeon of the Salt Lake Railroad, was on January Ist appointed chief surgeon with headquarters in Los Angeles. Dr. Cochran is one of the able young surgeons of Los Angeles. He is conscientious, thorough and energetic. Dr. J. R. Colburn, who has been the chief surgeon for several years, retired in order to devote himself to his extensive private practice.

Herbert Spencer says: "Heredity is the capacity of every plant and animal to produce other individuals of a like kind." Weismann's definition is: "The word heredity means that property of an organism by which its peculiar nature is transmitted to its descendants." According to G. Archball Reid: "The science of heredity is that science which deals with the organic relationships of progenitors and descendants."

At the monthly meeting of the Bernalillo County Medical Society, held in the office of Dr. E. Osuna in the City of Albuquerque, N. M., on December 4th, officers were elected for the ensuing year as follows: President, Dr. C. W. Taylor-Goodman; Vice-Presidents, Dr. L. G. Rice and Dr. John A. Reidy; Secretary, Dr. John R. Haynes; Treasurer, Dr. E. Osuna; board of censors, Dr. James H. Wroth, Dr. P. G. Cornish.

Dr. Sylvester Gwaltney, graduate of Marion Sims Medical College, Missouri, Dr. F. L. Anton, graduate of College of Medicine of the University of Southern California, Dr. Charles Lewis Allen, graduate of the University of Maryland, and Dr. G. G. Speer, graduate of the Detroit College of Medicine, Michigan, were recently elected members of the Los Angeles County Medical Association.

At the meeting of the Long Beach branch of the Los Angeles County Medical Society held on December 10th, Dr. Geo. H. Kress, Secretary of the California State Pure Food Commission, was the guest of honor, and spoke upon the subject of "Public Health Work and the

Medical Profession." The following officers were unanimously elected for the ensuing year: President, Dr. E. M. Freeman; Clerk-Treasurer, Dr. F. L. Rogers; Counsellor and Delegate to State Society, Dr. Frank L. Wood, the retiring president.

The California Eclectic Medical College located in the substantial building at 846 Lyon Street, Los Angeles, have just sent out their 29th annual announcement. Dr. J. A. Munk, so well known in this city, is the Dean. Amongst other names in the faculty, prominent members of this school, are Dr. O. C. Welbourn, Dr. J. C. Solomon, Dr. L. A. Perce, and Dr. M. Blanche Bolton. The Los Angeles Journal of Eclectic Medicine, edited by Dr. O. C. Welbourn, comes to us regularly and makes a creditable organ of the school.

Dr. W. B. Sawyer, of Riverside, California, one of California's prominent physicians, was a classmate in Harvard with Dr. Herbert L. Burrel, president of the American Medical Association. Dr. Sawyer hopes to get President Burrel enlisted in an endeavor to secure the meeting of the American Medical Association for Los Angeles either next year or in 1910. In a personal letter to Dr. Sawyer, President Burrel asks: "Can you furnish hotel accommodations in Los Angeles for 15,000 people?" Dr. Sawyer immediately replied: "You bet we can."

We have received the following reprints from the author, Dr. George Dock, Ann Arbor, Mich.: "Recent Advances in the Study of Heart Disease;" "Medical Treatment of Cholelithiasis;" "A Plea for Laparotomy Rather Than Paracentesis in Ascites;" "Compulsory Vaccination, Antivaccination and Organized Vaccination;" "Proprietary Medicines and Their Abuses;" "Clinical Observations in Exophthalmic Goiter;" "Chylous Ascites and Chylous Pleurisy,

in a Case of Lymphocytoma Involving the Thoracic Duct;" "Address of the Chairman."

Dr. W. S. Smith of Santa Monica recently spent several weeks with Herman I. Baldt of New York, and with Howard A. Kelly of Johns Hopkins. The doctor reached home about the middle of December. In a personal letter he says, writing from New York City: "There has been an endemic disease here that seems to resemble spinal meningitis. The profession is at sea as to its cause. It affects children between the ages of two and twelve years. The mortality is high. Those who recover have a paralysis of one side." Dr. Smith has recovered the perfect use of his eyes.

At the annual meeting of the Esmeralda County Medical Society held in Goldfield on December 4th the following officers were elected: Dr A. B. Turner, president; Dr. W. T. Liggett, vice-president; Dr. E. J. Howland, treasurer; Dr. Walter W. Rhyan, secretary. Dr. Anthony read a paper upon the subject of "Ectopie Pregnancy," and a "Statistical report of mortality and health conditions since the origin of the camp" was read by Assistant Health Officer DeWitt C. Norton, showing that a greater percentage of deaths occuring in the camp were due to pneumonia.

The society held its annual business meeting and smoker December 10.

Since Osler left there is no doubt but Prof. George Dock, of the University of Michigan, has become America's leading physician, but at the same time he is developing a mental condition that may soon require investigation at the hands of some of our experts. Here before us is a reprint from the Medical Library and Historical Journal of an article by Dr. Dock, entitled "The Alleged Dedication," which is one of the most convinc-

ing proofs. There have been other symptoms of Bibliophilic Aberrations, but we must acknowledge that this reprint and also one by the same author in regard to the Medical Library of the University of Michigan make mighty interesting reading.

The students of the University of School have Pennsylvania Medical formed an organization the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modeled. The various student societies take the place of the state organizations and elect members to a House of Delegates, which transacts all the business of the association. An annual meeting is held at which papers are read by chosen members, thus encouraging original research and a scientific spirit. The organization is named The Undergraduate Medical Association of the University of Pennsylvania, and already has over two hundred and fifty members.

Dr. Norman Bridge in his recently published volume on House Health (Duffield & Co., New York) says: "One should always be in a draught, never out of it," and that a draught of air does not produce colds, but prevents them. "Colds," he says, "come of lowered vitality, fatigue, indigestion and disease, producing germs that abound in confined house-air." And again: "In order to conserve health to the greatest degree possible, houses should be free from carpets, rugs, cloth hangings and upholstered furniture. If the floors are covered at all, it had best be with linoleum, or some other material with a flat surface, free from meshes, and thus incapable of hiding dust. The best covering of all," he adds, "is good paint, renewed if possible every year."

At the December examination of the State Board of Medical Examiners, held

in Los Angeles, the following passed: H. T. Daily, L. E. Carter, H. S. Duff, J. C. Magill, J. S. Talbot, Mary E. Fratus, W. G. Mahoon, L. T. Smith, Margaret Bell, E. J. Barobe, C. W. Usher, S. L. Butler, G. C. Sharp, J. C. Strasser, E. S. Packson, T. S. Ferry, H. G. Martin, G. H. Bartmann, C. H. Randall, J. A. Oates, J. E. Shields, W. A. Menne, A. R. Southeimer, W. F. Whelan, G. F. Lyon, J. H. McKay, W. W. Hoagland, C. R. Benney, C. E. Lawler, R. B. Skinner, H. W. Learn, C. T. Ehred, C. E. Wilson, T. Shinna, C. V. Gallagher, C. M. Horn, J. C. Jones, F. S. Post, A. H. Parker, E. E. Watson, A. W. Stokes, C. O. Forester, W. C. Wilson, G A. Snyder.

Dr. John Sheridan Barrett, of Prescott, Arizona, died December 9th. Dr. Barrett was born in San Francisco October 5, 1870, and graduated from the Cooper Medical College in 1833. was coroner surgeon in San Francisco for three years, when he located in Prescott. Arizona. He has been ever since one of the leading men of the profession in the Territory. Surviving him are his wife and two children. The Medical Society of Prescott adopted resolutions in which they testified to his kind, helpful and ever cheerful disposition and his indefatigable efforts in the alleviation of human suffering among the rich and poor alike, and often at the expense of great personal suffering. These resolutions were signed by T. B. Davis, R. N. Looney, C. E. Yount, John W. Flinn, Committee.

William H. S. Wood, senior member of the firm of Wm. Wood & Co., died in New York City, December 11, 1907. Mr. Wood was born in New York in 1840, the son of William Wood and the grandson of Samuel Wood, the founder of the great publishing house. He was a graduate of Havenford College and a member of the Orthodox Society of Friends. In 1865 he conceived the idea

and founded the Medical Record and chose Dr. Shrady as editor (who held that position for 40 years.) He was president of the Bowery Savings Bank which on the date of its last semi-annual report had \$100,000,000.00 deposits. He was prominent in many philanthropic works and made a great and useful hobby of horticulture and wrote several volumes on pomology and allied subjects. His well rounded life was that of an ideal American.

Dr. Geo. Frederock Shrady died in New York City, November 29, 1907, at the age of almost 71. The cause of his death was pyemia following an attack of gall-stones, after an illness of only two weeks. He was a native of New York City, and graduated from the College of Physicians and Surgeons in 1858. He established the "Medical Record" and was its editor for nearly 40 years. Besides his editorial work he wrote many scientific, practical papers. He was also on the editorial staff of the "New York Herald," and was sent by that paper to specially investigate the Bubonic Plague in San Francisco a few years since. He was one of the surgeons in attendance on President Garfield, and was in attendance on Gen. Grant during his last illness. When Emperor Frederick of Germany was suffering from an apparently similar affection of the throat, Sir Morrow Mc-Kenzie sought an opinion by cable from Dr. Shrady. We knew him quite well personally, and remember him as a genial witty, forceful man.

RADIUM IN CALIFORNIA.

A piece of uranium ore is on exhibition at the State Mining Bureau which is said to have been found in Kern County. This is the second sample found in the United States—Colorado claiming the first. About 2,000 tons, or 40.00 pounds, of this ore will yield one ounce of radium salt valued at \$12,000,000.

MISCELLANEOUS

SOCIETY NOTES.*

From the Vertebral Column of the Anatomical Courier.

Major and Mrs. Pectoralis entertained a large number of guests last night at their palatial residence, the feature of the evening being the musical programme. A large number of those invited arrived on the evening Train of Symptoms in a solid Phalanx; alighting at the Sterno-Clavicular Junction they proceeded to the home of the hostess in high spirits, the wit and laughter during the short walk being Humerus in the extreme. The house was beautifully decorated and the brilliant lights could be be seen for a Radius of many blocks.

The musical programme, though amateur, deserves especial mention, Miss Iris Bombe, one of Argyle-Robertson's pupils, sang the Rachitic Rosary with rich Vocal Resonance to the accompaniment of the Ilio-Tibial Band. the muffled tympan and the musical tinkling of Scarpa's Triangle being especially pleasing. The next number on the programme was a solo on an Excretory Organ, by Miss U. Reter, a tall, slender and little-known musician. So obscure a performer had she been up till last evening that some had never even heard of her wonderful accomplishment, and little attention was paid as she sat down before her instrument. But har lly had the "First" and "Second sounds" died away, when there were heard audible Sighs and Mitral Murmurs of astonishment. Such rich Muscular Tones and Cords had never before been beard in this city.

At the close of this selection there was a sudden Internal Ring, the Portal System opened, and Mrs. Sacch arose to admit Mr. Bili Verdin, a dark, bilious-looking gentleman, who had

just returned from a hazardous trip through the dark Interior. With graceful Peristaltic movements, he seated himself at the Ear Drums and gave some very clever imitations, which were heartily appreciated by this select Circle of Willis.

About this time the party split up, the Parietal Boss taking one division down to the Semi circular and Hunter's Canals to watch a Navel display. The other division was escorted by Anti Toxin to the Pancreatic for the Inspection of the safe deposit Cranial Vault.

In about an hour's time the whole party came together again to partake of some slight refreshment. The Inner and Outer Cranial Tables were loaded down with Atheromatous Plates, generously heaped with Cold Abscesses, Sphenoidal Wings, Wharton's Jelly, roast Lac teal (shot by the host), and some beautiful specimens of Mr. Adam's famous apples.

After the entertainment one of Mr. Bandle's Rings and a Lymphatic Chain were presented to the hostess in token of esteem and affection.

The punch was served by the Decidua sisters. Vera and Serotina. Miss Reflexa was unable to be present to the great disappointment of her many friends, as she was suffering from a complete break-down caused by the strain of recent Labor troubles in which she was involved.

The only incident which marred the happiness of the evening was the injury sustained by Mr. Gland of Montgomery (St.), while attempting to do a Gas tric. However, showing a great amount of Nerve, he was attended by the capital Dr. Gangli on the spot, the Sympathetic guests rendering the utmost assistance.

A. C. MACLEISH. '08.

^{*}Writen from notes inspired and jotted down during a lecture at the C llege of Medicine, U. S. C.

CALIFORNIA AND PROHIBITION.

Commons and Charities of December 14, 1907, quoting from an exchange, says:

"Twenty years ago in San Francisco they had 200 flourishing churches which were well attended. At the time of the earthquake, notwithstanding the increase in population by the thousands during the twenty years, they had 100 churches and 3400 saloons licensed by the people. The saloons caused forty churches to die and go out of existence. And one of the largest remaining churches had lost 50 per cent. in numbership and spiritual power. In northern California there is a town with 150 legalized saloons and twelve churches.

"People argue that you will kill the town if you kill the saloons. By referring to the United States Census, you will find in their reports something like this: 'In California there is not a town or city with the exception of Los Angeles, that has maintained the licensed saloon for any considerable number of years, that has increased in population and wealth to exceed twentythree per cent. Some of the towns have not increased at all; some one, some two, and some up to has high as twentythree per cent. On the other hand, there is not a city or town in the State of California that has had prohibition, that has not increased in wealth and population from sixty-three to two hundred and fifty per cent."

THE WHITWELL HOSPITAL, TUC-SON, ARIZ.

In a knoll on University Heights, overlooking the City of Tucson, in the background the magnificent range of mountains, the Sierra Catalina; sur-

rounded by trees and palms and flowers. the Whitwell Hospital is ideally situated in a location whose environment and view are highly conducive to the pleasant and speedy convalescence of the sufferer. The building has recently been completed, and it beauty of architecture is a marvel to all who have seen the hospital. It is just far enough from town to be easily accessible, and still to avoid the noise and bustle and dirt of the city. The perfect climate of Southern Arizona is one of the best in the world for sufferers from diseases of the throat and lungs, rheumatism, indigestion, and nervous diseases. The air is dry and balmy, the temperature is warm during the day, and cool at night, and there is a superabundance of health-giving sunshine.

The hospital is lighted throughout by electricity, and heated by steam. The furnishings are modern and elegant, and intended to please those who are particular. Rooms en suite with bath may be had by those desirous of the same. Every facility for the comfort of patients or convalescents has been provided by the management.

The medical and surgical equipment is singularly complete. There is a large operating room for the alleviation of surgical diseases by those skilled in the art of surgery. There are sterilizing, anaesthetizing, dressing and treatment rooms, all equipped with every modern device which has proved valuable as a therapeutic agent, or as an adjunct in the surgical field. There are appliances for the administration of electricity in its various remedial and diagnostic forms, and a static machine for X-Ray work.

To the right of the main entrance is the reception room luxuriously fitted up, where patients who are able to be up and around may receive their guests or chat with each other. Realizing that there are many patients who require the care and attention of a hospital, and still are not confined to their rooms, the management has endeavored to make provisions for such, and there is a library containing the latest books and magazines, a smoking room, a croquet ground, and a tennis court.

The culinary department comprises a large kitchen, a commodious butler's pantry, store-rooms, etc. Keeping in mind constantly the fastidiousness and capriciousness of the sick, as regards their dietary, the cusine is always of the most superior quality. Only the best viands the market affords are supplied, and these are prepared and served in the most tempting, dainty and palatable manner.

The hospital is conducted on a strictly ethical basis. A patient in the hospital may be attended by whatever physician he or she desires, and the orders of that physician are constantly carried out to the letter, his treatment upheld, and his advice sought on any important point. Tucson is singularly fortunate in having a large number of physicians excelling in all the different branches of medicine and surgery.

A large and efficient corps of nurses is on duty day and night, so that no patient need be in the slightest degree neglected. If necessary or desired by the physician or patient, a special nurse can be provided, at extra charge.

The hospital holds itself in readiness to accommodate patients suffering from rheumatism, asthma, bronchitis, nervous diseases, or almost any acute or chronic trouble except contagious diseases. Lying in and surgical cases will find that the hospital is well prepared to care for them. Any inquiries regarding terms, etc., will be cheerfully answered. Address Dr. Hobart P. Shattuck, Resident Physician, Whitwell Hospital, Tucson, Arizona.

TUBERCULOUS CAMP FOR COLO-RADO SPRINGS.

Mr. Frank J. Bruno, the executive officer of the Associated Charities of Colorado Springs, has issued an annual report that will be read with interest by the medical profession.

The following extract is particularly pertinent to the condition in a number of towns in Arizona, New Mexico and California:

"Among the diseases with which we have had to deal it is no surprise that tuberculosis stands easily in the lead, one-third of all our applicants being of this class. And as the tubercular patient is open to all other sources of ills, many of the diseases enumerated in this list are the result of the tubercular condition or its concomitant.

"This points very strongly to the need, if we are to do preventive work, of a tubercular camp where such people could be treated. There is, in this city, no place outside of the poor farm, where a poor person suffering from tuberculosis would be admitted. The Glockner, under the care of Sister Rose. is extremely charitable, but the necessity of maintenance and the capacity of the institution prohibit all but a very small amount of charitable work of this sort. Denver has five or six such sanatoria but only one that is open to tubercular patients of all stages. All of these sanatoria in Denver are overcrowded. Such a sanatorium as we need here could be constructed at a moderate cost-probably for \$5,000 or \$6,000, to accommodate 25 to 35 persons and run in connection with one or more of our existing institutions. By combining with institutions equipped for this class of work, we should secure the advantages of their organization, the economy consequent upon consolidation and the freedom from management, all of which are expensive. On our part, the maintenance of such a camp would

consist in the keeping in repair of its building or buildings and the board of its patients, which would probably be about \$400 to \$500 per year per patient. The present financial situation prohibits such an undertaking just now, but it is worth considering by the philanthropic people of this city, whether it is not one of the very best investments that can be made in the line of preventive philanthropy, to establish such an institution and maintain it either wholly or in part by money raised in this city. The Denver sanatoria are not financed by Denver money. It is a little risky to attempt estimates, but it is my personal opinion that Denver does not contribute more than 5 per cent of the expense of maintenance or establishment of these institutions. The Phipps Sanitorium is supported in part by the board of its patients; and in part by Mr. Lawrence C. Phipps of Pittsburg, who established the sanitorium, and for whose mother it is named. The two Jewish sanitoria, the only strictly charity sanitoria in Denver, are supported almost entirely by money from out of Denver. National Jewish Hospital in 1906 received 2 per cent of its income from Denver people, and the Jewish Consumptive Relief Society 6 per cent. These two sanitoria received \$97,573.44 in 1006. The rest of the money is provided by people in different parts of the country. Of course the large amount of volunteer work necessary to run such institutions is done by Denver men and women. Conditions are not quite the same between the above sanitoria and the one which we are proposing. The Denver sanitoria are national in their scope and so can call upon a larger body of subscribers than we, in handling the local condition, could command However, our condition is not strictly local. We are, as Denver and all Colorado places, a health resort, particularly for tubercular patients, and I feel that by an intelligent and vigorous attempt enough money could be raised outside of the city to at least establish such an institution, while we might be able to raise within the city the amount necessary for its maintenance; or the proposition might be reversed: We to establish it, and money from outside to maintain it.

"The value of such a sanitorium would be twofold. We could handle the cases of tuberculosis that come to us in a manner that would be in the highest degree beneficial to them. Pour people and those of moderate means would get what they come to Colorado Springs to find: cure or relief from tuberculosis. In addition to this, we should be working in line with the scientific effort in combating tuberculosis. If medical science has taught us anything, it is that tuberculosis is preventable and to a certain extent curable; that its utter prevention, and its cure, when it has not gone too far, depends upon the knowledge of certain rules of habit and of diet easily imparted. A sanitorium rightly managed does more for the popularization of this knowledge than any other one agency, so that by having such a sanitorium here, the work would be as fully preventive as curative. If tuberculosis is ever stamped out, it will be by the knowledge indicated above percolating throughout the entire body of the nation and anything that we can do to help this is one added factor to the ultimate overcoming of this worst of all our physical ills."

EVIDENCE OF THE SERVICE.

A physician, on presenting his bill to the executor of the estate of a deceased patient, asked: "Do you wish to have my bill sworn to?" "No," replied the executor. "the death of the deceased is sufficient evidence that you attended him professionally."

BOOK REVIEWS

PRACTICAL NURSING. A Text-Book for Nurses and a Handbook for all who care for the sick. By Anna Caroline Maxwell, Superintendent of Presbyterian Hospital School of Nursing, and Amy Elizabeth Pope, Instructor in Presbyterian Hospital School of Nursing. G. P. Putman's Sons, New York and London, 1907.

The first edition of this valuable work was published August 1907. This was quickly exhausted and a second edition was issued in October 1907. "Practical Nursing" the title tells the story. It is excellent for Nurse Mother and Physician.

THE PRINCIPLES AND PRACTICE OF MODERN SURGERY. By Roswell Park, M. D., Professor of Surgery in the University Buffalo, Buffalo, N. Y. In one very handsome imperial octavo volume of 1072 pages, with 722 engravings and 60 full-pages plates in colors and monochrome. Cloth, \$7.00, net, leather, \$8.00, net. Lea Brothers & Co., Philadelphia and New York, 1907.

This new individual book is the successor of the Surgery by American Authors edited by Professor Park, which ran through three editions. His collaborators therein have most willingly placed their work and accompanying illustrations at his service. As Prof. Park is equally at home in the surgical literature in English, German and French, the three languages to which everything in the civilized world must come for dissemination. his Modern Surgery may be trusted as an authoritative exposition of the world's most advanced views and practice at the present time.

To those who are acquainted with the work of Rosswell Park nothing can be said by the reviewer in justification or praise of the present work. His skill as a teacher of the first rank is manifest in his orderly arrangement and clear exposition. Accordingly his work possesses a wide range of importance, for it affords the student a logical training, thereby minimizing the labor both for him and his teacher, and serves the general practitioner and surgeon equally

as well as an authoritative guide in the most directly responsible branch of all professional work.

In part one the first chapter on Hyperemia, including both active and passive is very interesting, especially when taken in connection with the work that Bier has been undertaking along this line during the past few years.

In chapter two, on Thrombosis and Emblosis. Chapter three, Inflammations. Chapter four, Ulcer and Ulcerations. Chapter five, Gangrea. Chapter six, Autoinfection. Chapter seven, Surgical Fevers and Septic Infection. Chapter eight, Tetanus.

With this beginning he lays the foundation for his succeeding work, which is taken up with that precision and carefulness which is characteristic of all his work.

The book is well illustrated, and the reviewer knows of no single volume that is better adapted for general reference work covering the whole field of surgery.

THE PRACTICAL MEDICINE SERIES, comprising ten volumes on the year's progress in Medicine and Surgery under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-graduate Medical School. Volume II. General Surgery, edited by John B. Murphy, A. M., M. D., LL. D., Professor of Surgery in Rush Medical Coll ge in affiliation with the University of Chicago). Series 1907. Chicago: The Year Book Publishers, 40 Dearborn Street.

In the introduction of this volume, the following of interest may be quoted: "Therapeutic nihilism is no longer the professional fad; it has been a great etiologic factor in the development of "isms" in and "science," etc., out of the profession. The public is justly demanding relief from suffering and pain; it will not further tolerate the stilted, professional-satisfying knowledge of pathology and diagnosis of the graver

organic diseases only; it demands therapeutics for its pains and discomforts. Suffering is the same to the patient whether it has a functional or organic etiology. The eradication of symptoms is exacted after surgical operations as well as the extirpation of the foci of disease."

Farther on he makes a very strong assertion as follows: "All through the field of abdominal surgery, early and exact diagnosis with prompt operations and improved technic are constantly producing better results, with one notable (and I must say, inexcusable) exception. According to Dr. Coffey's statistics, the mortality in appendicitis, in large hospitals, is still too great, clearly resultant from delay in the patients' appearance for surgical relief. It seems that the time for legal recognition of and punishment for delay in diagnosis and operation for appendicitis is due, and unless the profession awakens to it shortcomings, an enactment will soon be placed on our statute books. The practice of procrastination in all acute infections, particularly in those so readily recognized and so amenable to timely treatment as purulent meningitis. acute osteomyelitis, perforative peritonitis appendicitis, cholecystitis, etc., should not longer be tolerated by the profession. and will not by the public."

On page 95, with regard to Spontaneous Cures, he says: "The occurrence of spontaneous recoveries from cancer, indicating the existence of immune forces capable of terminating the disease, demonstrates cancer is not necessarily incurable, and should serve as an additional stimulus to research directed toward the discovery of a serum-therapeutic treatment."

This volume II on "General Surgery" is much larger and more complete than the corresponding ones of former years.

These individual volumes of the "Practical Medical Series" can be procured separately.

INTERNATIONAL CLINICS, a quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology Laryngology, Hygiene, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world, edited by W. T. Longcope, M. D., Philadelphia, U. S. A., with the collaboration of Wm. Osler, M. D., John H. Musser, M. D., A. Mc-Phedran, M. D., Frank Billings, M. D., Chas. H. Mayo, M. D., Thos. H. Rotch, M. D., John G. Clark, M. D., James J. Walsh, M. D., J. W. Ballantyne, M. D., John Harold, M. D., Richard Kretz, M. D., with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Clarsbad. Vol. III. Seventeenth Series, 1907. Philadelphia and London. J. B. Lippincott Company, 1907.

Volume II of this Seventeenth Series is taken up under several sections as: 1st. Treatment; 2nd. Medicine; 3rd. Surgery; 4th. Gynecology; 5th Genitourinary Diseases; 6th. Ophthalmology; 7th. Neurology; 8th. Dermatology; 9th. Pathology.

Under "Treatment" E. S. Bullock, M. D., of Silver City, N. M., has an interesting article on the "Curability of Tuberculosis." He is inclined to the view that the profession is too much given to optimism in regard to prognosis, and believes that at the present time we are claiming, as a profession, too large a percentage of cures and that we are not wholly fair to our patients in making them all believe that they are to recover.

With regard to early diagnosis he very wisely says "that percussion is practically valueless in very early stages. The same is true of voice and whisper transmission, nothing but auscultation of breath sounds should be depended upon in this stage. Other sounds are helpful when, present, but mean nothing when absent. The patient should never be reassured upon the occurrence of a hemmorrhage from the respiratory tract or told off-hand that it is from his throat. Nature's red flag should never be overlooked or underestimated."

On page 191, Hugh H. Young, of Baltimore has an interesting article on "Conservative Perineal Prostatectomy for Chronic Prostatitis. After removing the prostate he approximates the levators with a single catgut suture, and believes this an important part of the technic. While formerly he had seen several rectal complications in the way of fistulae, in his last 140 consecutive cases he has had no unpleasant results. He says: "This one suture has entirely removed all danger of the one bad result, which I feared after this operation."

Among the other interesting articles of the volume is one on Inflammation of the Bladder and Gall Ducts by George Tully Vaughan, of Washington, D. C.

A TREATISE ON FRACTURES AND DIS-LOCATIONS. By Lewis A. Stimson, B. A., M. D., Professor of Surgery in Cornell University Medical College, New York. New (5th) edition, thoroughly revised. Octavo, 84f pages, with 352 engravings and 52 plates. Cloth, \$5.00, net; leather, \$6.00, net; half morocco, \$6.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

In his volume, which has now become classical and the authority accepted both by the profession and the courts, Dr. Stimson has covered every known form of these lesions, many of which were first described in his pages. His literary style is notable for clearness so that his readers need not err. His work stands alone in literature as including a full consideration of Dislocations as well as Fractures, two cognate subjects advantageously handled in close connection. This single volume accordingly affords complete and authoritative information on a large and important surgical specialty. Its recognized position is shown by the demand for another new edition.

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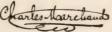
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the fifth, which the author has again revised to the latest date.

This volume is one that every medical man who, called upon to care for fracture cases, should have at his disposal. It is quite complete and exact, and though while not crowded with illustrations has enough to cover the point requiring illumination in this direction.

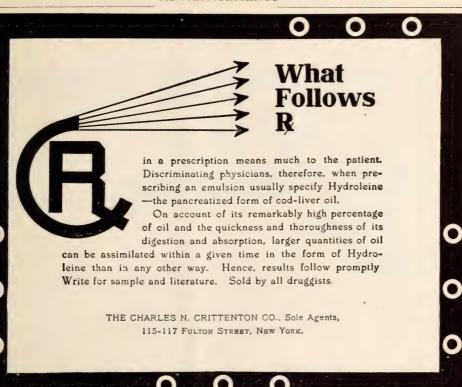
The fact that it is used by many of the best medical colleges as a text-book on Fractures is another recommendation for its accuracy and genuine worth.



The above is the book-plate of Lindley Murray, Botanist, Lawyer, Financier and Grammarian. This talented man was born in Swantura, Pennsylvania, in 1745. In 1753 his father, a Quaker merchant, moved to New York City, where he owned a beautiful country seat, at what is now Murray Hill. Besides being the merchant prince of his day, he was the largest owner of ships engaged

in the colonial trade. In 1765 Lindlay Murray, after passing four years in legal studies, was admitted to the bar.

Being a member of the Society of Friends he took no part in the Revolution, but retired to Islip. Long Island, and spent four years in fishing, boating and hunting. He returned to New York City in 1779 and entered into business speculation under the direction of



ON BOILING CATGUT IN TUBES

"Van Horn," Catgut—Plain and Chromic—may be boiled an indefinite number of times with the instruments without impairing its tensile strength.

Contamination of glass tubes by handling is more or less a greasy one, due to the perspiration always present in and upon the skin, and the peril of this form of sepsis cannot be entirely eliminated by the use of an aqueous solution of bi-chloride.

Hence our recommendation that tubes be boiled with instruments before operation.

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his father with such success that at the close of the Revolution he was able to retire with a fortune to a beautiful place in the Hudson. He had been a sickly child and now a muscular affection of the legs developed so that he could not walk. He was induced to search for a better climate and he sailed for England and settled near the City of York.

His English Grammar was written for the use of a young ladies' school near York. It was first published in book form at York in 1795, and its success was immediate and extraordinary. Edition after edition was published in a few years. It was introduced into all the English and American schools, and made his name a household word in every country where the English language was spoken.

He never returned to America but being incapacitated for all exercise he devoted himself to botany and literature. The collection of plants in his garden at Holdgate, England, surpassed the royal gardens at Kew, while his library was rich in philological, historical and theological works. He died in 1826 at the ripe age of 81. He left a fund for the publication of moral and religious literature which is now held by the New York Yearly Meeting of Friends.

THERAPEUTICAL HINTS

"Kings Medical Prescriptions" is a selection of famous prescriptions of prominent doctors from Sydenham down to the present day. 350 pages. Cloth \$1.00; paper cover 50 cents, postpaid. Address Practical Science Co., 14 Dutch St., New York City.

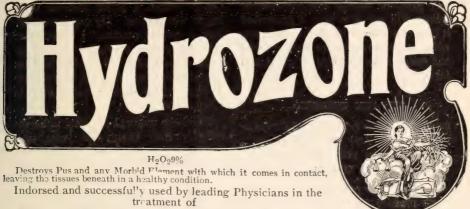
For the prevalent "La Grippe" much benefit is to be derived from the use of Antikamnia and Salol Tablets. Two every 3 hours in the stage of pyrexia and muscular painfulness, and later on when there is fever and bronchial cough and expectoration the patient should have an Antikamnia and Codein tablet every 3 hours.

Norocain, the letest synthetic product of Einhom and Uhfelder appears to be the best substitute for cocaine so far produced. Sonnenborg reports three hundred cases of spinal anesthesia and considers the Norocain Supramenalia combination the ideal one for this work.

An Efficacious Rat Poison.—The manager of a large estate in Austria had for some time tried in vain to destroy the rats with which the estate was overrun. He at last sent to the Bacteriologi-

cal Institute of the Landwirtoschafts Kammer for the Rhein Province in Vonn for a preparation of the bacillus for rats similar to that already known as Looffier's typhus bacillus for mice. He received fifteen small tubes of the preparation, which he dissolved in five bottles of a solution of salt and water. He threw into it as many little pieces of bread as could be well saturated by the solution. These pieces of bread were on the 13th June laid out in the places which the rats were in the habit of frequenting. Next morning no rats were to be seen. About eight days later the first dead rats were found, and a number of others could be seen moving along slowly, evidently very sick. On the 23rd June and the 2nd July a further similar supply of saturated bread was put down, and by the middle of July all rats had disappeared. No damage was apparently done to any other animal on the estate. The cost of a tube of the bacillus was one shilling.

Man's last leadership—when he leads his bride to the altar. The Englishman precedes it with an h.



Diseases of the Nose, Throat and Chest.—
Open Sores.—Skin Diseases.—Inflammatory and Purulent Diseases of the Ear.—Diseases of the Genito Urinary Organs.—Inflammatory and Contagious Diseases of the Eyes, etc.

In order to prove the efficiency of HYDROZONE, I will send a 25c. bottle free

to any Physician upon receipt of roc. to pay forwarding charges.

Note.—A copy of the 18th edition of my book of 340 pages, on the "Rational Treatment of Diseases Characterized by the Presence of Pathorenic Germs," containing reprints of 210 unsolicited clinical reports, by leading contributors to Maclical Literature, will be sent free to Physicians mentioning this journal.

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Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

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Fluidextract cascara arom I oz.
Fluidextract senna I "
Tincture rhubarb arom... 2 dr.
Tincture cardamon comp. 4 "
Spirit of peppermint.... Io m.
Syrup, to make... 4 oz.

This is a very pleasant and mild laxative or an active cathartic according to the size of the dose given. Children do not object to taking it, the aromatics giving the mixture an agreeable taste.

BEST UTERINE TONIC AND ANTISPASMODIC.—From L. ch. Boisliniere, M.D.,
late professor of obstetrics, St. Louis
Medical College: Dioviburnia is the
best Uterine Tonic and Antispasmodic,
relieving the pains of Dysmenorrhea
and regulator of the Uterine Functions.
I cheerfully give this recommendation
of Dioviburnia.

Friend—"What's the matter, old boy? You look disappointed."

Algy—"I thought I had appendicitis, but the doctor said it was only indigestion."—Court Journal.

THE TREATMENT OF ALCOHOLISM.—
The treatment of alcoholism often requires the use of vigorous tonics, and none will give more satisfactory or prompt results than Gray's Glycerine Tonic Comp.

Dr. Joseph P. Fearrington (Univ. of Maryland School of Medicine, '87) Winston-Salem, N. C., under date of October 2, '07, says: "I think Sulpho-Lythin a most excellent product and prescribe it frequently, particularly in Catarrhal Jaundice, as a substitute for calomel and find it more effective than any effervescent saline that I have used up to the present time. Sulpho-Lythin

will give me results that effervescent salines will not give me. I prescribed it in a case of catarrh of the duodenum with the finest results, for a patient who had been under the care of physicians for years."

INFANT FEEDING.

BY HENRY GIBBONS, JR., M.D., SAN FRAN-CISCO, DEAN AND PROFESSOR OF OB-STETRICS IN THE COOPER MED-ICAL COLLEGE.

From 30 to 40 per cent of the women in my practice are unable through some cause to nurse their babies. In about 15 per cent of them there is no milk at all; 15 to 20 per cent have poor milk, or it lasts one, two or three months only. I very rarely approve of a wet nurse. In default of mother's milk I prefer to use modified cow's milk.

I do not necessarily employ one modification exclusively. I have found *Sunbright's Food an excellent modifier, also Eskay's, but I often use Holt's formulae and find that the "Materna" proves satisfactory in the hands of nurses and mothers. I prefer the milk of a mixed herd of cows, but I have not actually demonstrated its superiority by actual test. I have never yet used citrate of soda as a modifier, though I have often promised myself I would do so. I have never used goats' milk.

I determine the best kind of food largely by use, and by a calculation of the proportions of its constituents. As nearly as may be I observe the same rules in artificial feeding as in breast feeding. In many cases a food, once found, continues to satisfy, but quite often the contrary is the case; a food will agree for a while and then have to be changed. In many instances a bottle-fed child thrives almost as well as a breast-fed. In quite a large proportion of cases, however, not so well.

On the whole, I prefer artificial feeding to wet nursing. My experience has been in private practice. I do not lose babies from this cause, but I have my trials occasionally. The chief difficulty is gastro-intestinal troubles, or difficulty in digesting the casein. Rarely there is tuberculosis.

I find the mothers of today more intelligent than twenty-five years ago, but then I practice among a more intelligent class than I did then. I prohibit nursing when the mother is tuberculous or syphilitic, or in impaired health, also when the milk, though abundant, manifestly disagrees, when its constituents are not in proper proportion, and the defect cannot be remedied. —The Medical Standard.

*Sunbright's Food is Barley Flour partially dextrinized.

ANTIVIVISECTION.

A bill, which provides for the restriction of research by experiment on living animals, has been presented to the New York State Assembly. It does not, however, propose to abolish vivisection, but provides "that experiments on living animals shall be attempted only under the authority of the faculty of a college or university incorporated under New York laws or under authority of the State Commissioner of Health or a City Board of Health." The State Health Commissioner is to issue the license for such animal experimentation. The bill also provides that before and during the experiment the animal must be completely under an anesthetic, and if pain is likely to be felt when the effect of the anesthetic has passed away the animal is to be instantly killed. Such experimentation is not only for the advancement of general knowledge, but, humanely speaking, greatly useful for saving or prolonging life, or alleviating suffering.-St. Louis Medical Review.



Vol. XXIII.

Los Angeles, February, 1908.

No. 2.

DR. WALTER LINDLEY, Editor.

DR. F. M. POTTENGER and DR. GEORGE H. KRESS, Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW,

Associated Editors.

THE OPSONIC INDEX AS A GUIDE TO THE ADMINISTRA-TION OF VACCINES.*

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The opsonic theory has caused much discussion in medical literature both at home and abroad during the last year. Numerous cases have been reported and various charts published which are diametrically opposed to each other.

The literature on this subject is so voluminous and so contradictory that many general practitioners have lost faith in the determination of the opsonic index for any help in diagnosis or treatment. Therefore, valuable results which might have been obtained from this work have been lost because of the apparently hopeless disagreement among laboratory workers.

Hektoen, of Chicago, believes that opsonins are distinct substances which are increased during immunization and that although their measurement is not always a definite guide in determining the dose of vaccines, the proper use of the opsonic index is of great value in many cases.

Hollister and his associates of St. Luke's Hospital, Chicago, give very favorable accounts of opsonic methods and close their very full report in a recent journal on the application of opsonic work to surgery as follows:

"We cannot agree with the conclusions from different American laboratories to the effect that one cannot depend on the present-day technique for accuracy in the estimation of the opsonic index among skilled workers. We have found on the contrary that after skill has been acquired and like conditions governing findings are followed that the final results of different observers grow more accurate and agree with but slight variation."

The opsonic theory and vaccine work in Johns Hopkins Hospital has been under the supervision of Dr. R. I. Cole, whose real attitude towards the work seems rather hard to understand on account of his contradictory statements; "it is rather early in the history of opsonic work to decide regarding its reliability." "The clinical evidence is not sufficient as yet to make definite

^{*}Read before the Southern California Medical Society, Riverside, Cal., December 2, 1907.

statements." On the other hand, in tabulating some cases of localized tuberculosis and gonorrhoeal arthritis treated with vaccines and controlled by the opsonic index, Dr. Cole reports findings which correspond to those demonstrated in Sir Almoth Wright's laboratory. The reliability of the opsonic technique is criticized at length.

Park, Potter & Biggs of the Research Laboratory, New York, agree with Johns Hopkins' workers in their criticisms of the technique and offer many suggestions regarding the modification of some of the minor laboratory procedures. In a recent article in the Journal of Medical Research, Park & Biggs have modified their original opinion in regard to the use of vaccines by this statement:

"The few cases which we have studied have impressed upon us the opinion that the vaccines have a restricted field in therapeutics, although it is greater than we believed possible before the reports of Wright were published."

The clinic of Sir A. E. Wright, which I had the pleasure of visiting for a month this summer, shows very strikingly the results of Wright's teaching and the use he makes of vaccines in the cure of local tuberculosis, various pyogenic infections and old chronic inflammatory conditions. Most of these cases have been given up as hopeless by the general practitioner. A detailed statement of even the most interesting cases would occupy more time than is alloted to me this afternoon. Between fifty and one hundred patients received inoculations every day and the confidence in what Dr. Wright had done for them, and what he could do, was pathetic. The result of Dr. Wright's experience for five years in the administration of vaccines, controlled by the opsonic index, has been well expressed by Welch in a statement that the work of Wright has been the greatest contribution to scientific medicine in the last twenty-five years.

In his earlier work Prof. Wright says, "We can select the appropriate time and dose of vaccines only by examining the blood and measuring its content in protective substance in each case before re-inoculation."

In the routine work at St. Mary's, on local tubercular lesions at least, indices are estimated every ten days to two weeks, and more often when unusual clinical symptoms appear. Tuberculin is given to the patient, however, every four to eight days and its administration is not preceded or followed each time by the determination of the opsonic index. Very interesting are some of the statements of Prof. Wright to his students such as: "Do not make slaves of yourselves to the opsonic index." "Study the special clinical evidence for an indication of the dose of a vaccine." "An acute exacerbation of pain in a tubercular joint may be a more delicate indication that the tubercular process is again active than the determination of an opsonic index."

In his earlier writings the negative phase was emphasized, but this summer his advice to his students was to avoid the depressing effect of even a slight negative phase and he recommended more frequent and smaller doses of vaccines.

That substances, called by Wright "opsonins," existing in all blood sera, has been repeatedly demonstrated in laboratory experiments by the profession in America, Germany and France as well as in England, and that they act on the bacterium by preparing it for phagocytosis is universally accepted, but whether or not the determination of their amount is a reliable guide to the inoculation of vaccines is the question at issue. The American literature abounds in criticisms of the opsonic technique, many of which are well founded. Other objections are puerile in the extreme and not worthy of more than passing notice. The errors from crude methods of measurement and the difficulty of obtaining a standard bacterial emulsion are among the most serious in the technique, but if we consider that almost every laboratory procedure has its inaccuracies, which are more and more eliminated as the worker grows more expert, the error in opsonic technique is by no means discouraging. Think for a few moments of the inaccuracies of blood counting and the interpretation of widal reaction. Yet you all remember where this very work has been of help to you both in diagnosis and in clearing up doubtful cases. The use of opsonic methods in Sir Almoth Wright's laboratory has been the means of his success with vaccines, and in the earlier part of his work the laboratory methods were not so exact as they are at the present time.

There are certain cases in which the opsonic index may be of great value. In mixed infections such as occur in pulmonary tuberculosis, sinuses, empyema, inoperable fistulae, indolent ulcers and old infections resisting ordinary surgical and medical treatment. if cultures be made from such lesions and the organisms studied with a view of determining the most active infective agent, the opsonic index will be found of inestimable value as an indication of the most active organism so that the proper vaccine may be made. Such a case I have had under observation for about ten weeks. A man suffering from tuberculosis of the bladder had an operation and two sinuses, one suprapubic and other perineal, have resisted all forms of treatment. The patient has been inoculated with tuberculin for many months. Cultures from these sinuses showed staphly-coccus pyogenes albus, coli commune and bacillus pyocyaneus, with a predominance of the two latter organisms. I therefore took the opsonic index five times to coli commune and with the following indices:

I +.8 1.4 .0 which indicated to me that coli com-

mune was particularly active in this case. We have prepared an autogenous coli vaccine but the time is too short to give any report of progress. Of course there is a great deal to fight against in such a case, but no one seems able to heal these wounds permanently, and so vaccine therapy offers the only hope. The opsonic index may be of great value in cases of local tuberculosis where marked fluctuation occurs in the opsonic index, tuberculin is contraindicated in ordinary doses because the patient is inoculating and re-inoculating himself all the time and there is no method of deciding the extent of such inoculation, and proper doses may be decided upon only through the help of the opsonic index. It is also of value in determining a persistently low index in tuberculosis with an idea of using as large a dose of tuberculin as possible and yet controlling the negative

The results of the use of the opsonic index in gonorrhoeal arthritis have been favorable in the hands of both Dr. Cole and Dr. Hollister. The opsonic index to the gonococcus in these infections is always low, and a marked local reaction occurs after the use of gonococcus vaccine. Dr. Cole reports twenty cases of athritis treated in Johns Hopkins Hospital by conococcus vaccine and controlled by oposonic indices. In all these cases the patients made rapid and uninterrupted recoveries with no anchylosis and the treatment has been recommended as yielding more favorable results than the usual medical or surgical treatment.

Dr. Hollister's cases of gonorrhoea! arthritis at St. Luke's were as convincing as those of Dr. Cole, and the dosage was controlled by the opsonic technique.

In furunculosis and acne, on the other hand, the opsonic index is of little practical value as an indication for dosage. The majority of acne cases show a pure culture of staphylococcus pyogenes albus. I have been treating a case of acne of sixteen years' duration (the sister of a physician), which has resisted all forms of treatment. She has been under some of the best men at home and abroad. The usual course has been observed in this case, acute exacerbations and then almost complete remission. The young woman has received one hundred million staphylococcus albus every four days for about ten weeks with an omission during this time of two successive doses. Coincident with the omissions the face, neck and back showed a marked increase in acne pustules much to the alarm of the patient and her friends. Two hundred million staphylococci were then inoculated and a coincident remission of the acute acerbations occurred.

The general appearance of the face is better, not judging from my own observation, but those of the friends who know nothing of the vaccine treatment. I have not thought it necessary to take this patient's opsonic index because of the clinic evidence, and although a complete cure may not be accomplished the pustules are smaller, not so numerous and more superficial. Repeated attempts to cultivate Gilchrist's acne bacillus have

failed and as long as there is any obscurity about the real cause of acne is it reasonable to hope for more than a prevention of pyogenic infection? The usual medical treatment has been faithfully persisted in by this young woman and I think we should not lose sight of the importance of every clinical means to benefit the patients whose immunity we are raising by the use of vaccines.

Dr. Wright gives a mixed vaccine of albus, aureus and citreus in acne.

Ross, of the Toronto General, recommends an autogenous albus vaccine and several cases treated by Ross while I was at the Toronto General Hospital showed marked improvement after three to six weeks' treatment.

In view of the fact that a certain personal element and other unavoidable errors may enter into opsonic technique even in the hands of laboratory men, it is considered advisable to take many opsonic indices before beginning treatment so that every possible error may be eliminated, and in the hands of a careful bacteriologist I see no legitimate reason why opsonic methods should not be used with great benefit in diagnosis and as a guide to the administration of vaccines.

SOME OBSERVATIONS ON INTRATRACHEAL INJECTIONS IN THE TREATMENT OF CHRONIC RESPIRATORY AFFECTIONS.*

BY P. S. DONNELLAN, M. D. PHILADELPHIA, PENNSYLVANIA.

In accepting, sir, your very courteous invitation which I esteem a great privilege, to present a paper at the annual meeting of the Southern California Medical Society, I felt that a few remarks on a practical subject would possibly be of more interest to the members who are nearly all general practitioners, than a highly specialized paper filled with fine-spun theories and technicalities and would bring out in the

discussion many valuable points in the experiences of the members that would add to my own imperfect knowledge on the subject.

For these reasons, it occurred to me that some observations on the direct medication of the Trachea and Bronchi by Intra-tracheal Injection and the presentation of a special syringe I have devised for the purpose would prove of some interest to the members.

^{*}Read by invitation before the Southern California Medical Society at the Thirty ninth semi-annual Meeting, Riverside, California, December 5th, 1907.

Direct medication of the Trachea and Bronchi is by no means a novel proceedure in the treatment of respiratory diseases and has occupied the attention of those who have made a special study of these affections for the past fifty years. In 1855, Dr. Horace Green of New York, injected a solution of nitrate of silver into the larvnx by means of a rubber tube, a proceeding which was unanimously condemned by the New York Academy of Medicine at the time. Nothing further was heard of this therapeutic measure until two years later when Bennett of Edinburg, reported encouraging results in a series of cases of pulmonary tuberculosis in which he used intra-tracheal medication—the temperature was reduced and a general gain in health was reported in each instance. A recent search of the literature at my command has found many reports of favorable results from intra-tracheal injections in pulmonary diseases, especially when complicated by fetid bronchitis and copious expectoration. One observer, Campbell in the Transactions of the Medico-Chirurgical Society of London for 1895, records an extensive trial of intra-tracheal injections in a series of cases of asthma. bronchitis. bronchorrhea. pulmonary tuberculosis, hemoptysis and abscess of the lungs. He injected medications into the trachea over 4000 times with almost invariably favorable results. Even in the inevitably fatal cases of chronic pulmonary tuberculosis, relief from cough, pain and expectoration was experienced by the patients.

I have reported a similar series of cases before the College of Physicians of Philadelphia and The American Laryngological, Rhinological and Otological Society and the British Medical Association at Oxford, England, in 1904, with equally favorable results in selected cases. It seemed to me a much more rational and satisfactory way of dealing with this class of cases than the usual

way of medication by the stomach which only too frequently disordered the patient's digestion without relieving the pulmonary condition. This is especially true of pulmonary tuberculosis, in which, as you are aware, it is of the utmost importance that the strength of the patient be maintained by perfect digestion and assimilation. Direct medication of the trachea by injection, has, in my opinion, a distinct advantage over a similar proceedure by inhalations and sprays which rarely reach below the vocal cords. It can readily be carried out by the general practitioner with a little practice-indeed anyone who can use a laryngeal mirror can give an intratracheal injection and keep his patient under his personal observation through the course of treatmentchanging the medicament as it seemed indicated by changed conditions instead of allowing the patient to use medicinal treatment by the gastro-intestinal route when it was often positively harmful.

In my earlier experiences with intratracheal injections, I used the Muir syringe, but I found that the wide barrel of this instrument obscured the lone of vision and prevented the canula from being guided into the trachea with certainty. After a series of experiments, I concluded that an annealed glass syringe with a barrel of four drams capacity and fitted with an asbestos plunger was the most practical instrument. The barrel as you will observe, is reinforced with a metal jacket to which are attached a revolving collar with rings for the insertion of the index and middle fingers of the right hand—a device of much value in steadying the instrument during its use. The piston has a ring for the thumb and attached to the distal end of the barrel is a mental canula, bent at a right angle and having an olive-pointed closed tip, with four fine lateral openings near the end-an advantage over the usual open tip which discharged the injection too freely, producing paroxysmal coughing. The entire instrument can be sterilized by boiling.

In giving an intra-tracheal injection, the technic is as follows: The larnyx is first anesthetized with a 4% solution of cocaine: the syringe is then charged with the selected medication previously heated to about 100% F .two drams being the amount at first employed until tolerance is established when it can be gradually increased to four drams. The patient is instructed to protrude the tongue and to hold its tip in a napkin, while the operator, guided by the laryngeal mirror, inserts the tip of the canula between the vocal cords, and, while he takes a deep breath, the injection is slowly discharged into the trachea. Care must be taken that the injection does not enter the esophagus instead of the trachea: that it is given during inspiration only, and that the tip of the canula is not allowed to touch the fauces, the base of the tongue or the epiglottis.

If these details are faithfully carried out the patient does not experience any unpleasant after effects, but, on the contrary, is impressed by the beneficial effects of the injection which can be felt for several hours over the pulmonary area. In many instances I have detected the odor of the medication in the patient's breath twelve hours after the injection was given and have been able to demonstrate to the satisfaction of the attending physician and the patient the presence of the injected fluid in the pulmonary cavity of a tuberculous patient. In suitable cases the expectoration is diminished, not only in quantity but in viscidity—the latter being very marked—the heavy nummular masses of mucopus being replaced by frothy mucus in which the tubercle bacilli are less numerous and occasionally absent. It is important that suitable cases should be selected for this plan of treatment so as to give the best results and not to add to the discouragement of this class of patients by advocating intratracheal medication as a panacea for every case of pulmonary disease. It is highly necessary to emphasize the point that the injections are not only useless. but distinctly harmful in acute or subacute affections of the respiratory tract. As an adjunct to the open air treatment of chronic pulmonary tuberculosis in the unequalled climate of Southern California, in my opinion, intra-tracheal injections are a distinct addition to our Therapeutic Armamentarium in selected cases, not only for the beneficial effects they produce, per se, but by that subtle influence which we call "Suggestion" so ably discussed by Dr. Robertson in his interesting paper last evening. They supply an element of "HOPE" and the patient realizes that something is being done to aid him in his battle against the dreaded White Plague and he has proof positive the disease is being attacked actively and aggressively at its foundation.

The vehicles I have found most satisfactory for the injections are any of the fluid petrolium oils. Pure olive oil or a specially distilled glycerine are also excellent for the purpose. Added to these, the medications found most serviceable are creasote, menthol, camphor or chloratone, in 1% to 4% solutions either singly or in combination—the medicament being varied to suit the individual case and other drugs added according to the indications present; thus when irritable cough was a prominent symptom 1-8th gr. of codeine was added to advantage: or when fetid bronchitis was present 1/2 gr. iodoform or permanganate of potassium was found to be a useful addition to each injection. Watery or alcoholic solutions should never be used.

ARTERIO-SCLEROSIS.*

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The term arterio-sclerosis includes many distinct pathologic processes. We can at present recognize several separate types. First is the nodular type. This is by far the most frequent and constitutes the well-known atheroma.

This occurs mostly in the larger arteries and is characterized by the occurrence of sharply elevated patches, firm to the touch, and of a grayish color. Microscopically these patches show hyperplasia of the subendothelial connective tissue coat of the intima, with round cell infiltration on the borders of the patch.

Later the color of these areas becomes yellowish, owing to fatty degeneration of the hyperplastic tissue. Liquefaction begins in the center of the area and we have a cavity filled with detritus, fatty granules and cholesteria. This constitutes the so-called atheromatous abscess. This liquefaction may extend to the endothelium and rupture into the lumen occurs and an atheromatous ulcer results. Calcification occurs subsequently or may precede the liquefaction and calcareous plates are formed in the floor of the ulcer or in the connective tissue coat of the intima. In rare instances these calcareous plates may by metaplasia change to bone. In association with the later stages of these processes the media becomes involved. Proliferation of connective tissue acrophy of the muscle cells and disappearance of the elastic fibers is usually seen.

Vascularization of the intima may occur, the new vessels penetrating from the media cicatrical tissue then forms in the atheromatous ulcer and complete healing may occur.

In another type the process involves the smaller arteries most frequently of the kidneys and brain, but is at times widely diffused throughout the body. In this form the subendothelial connective tissue is likewise involved primarily. The whole circumference of the vessel is usually attacked. Microscopically there is seen a diffuse production of new connective tissue with no tendency to degenerative changes. The lumen is markedly narrowed and often obliterated. Associated with this is often a marked thickening of the media and also of the adventitia. To this type belongs the endarteritis obliterans of Virchow and the arterio-capillary fibrosis of Gull Sutton.

A third type is that described by Monckeberg, occurring in the larger peripheral vessels, especially of the extremities in elderly people. Here the lesions are primarily in the media, in patches, with degenerative changes in the muscle cells, fracturing of the elastic fibers and subsequent calcification of these areas. In the syphilitic type of arterio-sclerosis the media likewise is involved. Here, however, there is a production of inflammatory tissue with no tendency to calcification, but rather cicatrical contraction.

Lewaschem and later Fraenkel described still another type. The former produced this form by passing through a nerve trunk a thread soaked in acids. Fraenkel described it as occurring in the peripheral vessels in several nervous disorders. In this type there is a marked hypertrophy of the media with narrowing of the lumen almost to obliteration.

The etiology of these various types of arterio-sclerosis is probably as various as are the types, but we are not at present in a position to understand the operation of the different causes. There are at least two factors, viz., high pressure and toxic substances. In the past four years many experimenters have

^{*}Read before the Southern California Medical Society, December 4, 1907, at Riverside, Cal.

followed in the footsteps of Jossué, who in 1903 first produced arterio-sclerosis in rabbits by the injection of adrenalin. These experimentors have all produced a form of arterio-sclerosis in a considerable proportion of the animals operated upon. The animals have received gradually increasing doses intravenously on alternate days for a period of two to six weeks. In the aorta at autopsy they have found patches the size of a pinhead and upwards. According to Klatz of Montreal these areas are identical with the type described by Monckeberg.

Miller of Chicago in the past eighteen months claims to have produced in rabbits by the injection of barium chloride an arterio-sclerosis which begins in the intima and closely resembles the atheromatous type in man.

Both of these drugs markedly increase blood pressure; adrenalin causing a sudden and evanescent rise while barium chloride increases the pressure more slowly and maintains it for a longer time.

Whether the increased blood pressure alone or the toxic action alone or both combined constitute the real cause has not been settled definitely.

Braun claims to prevent the increased pressure by the simultaneous administration of anylnitrite, but obtained identical results with those caused by adrenalin alone. Miller, however, failed to prevent entirely increased pressure by the combined administration, although the resulting pressure was less than with adrenalin alone. In none of Miller's rabbits, however, did arteriosclerosis develop.

Erb (Jr.) believes that the changes produced by adrenalin are due to lesions of the vessels of the adventitia, but this theory is largely disputed. Many variations in the experiments have been carried out in order to determine the manner in which adrenalin acts, but so far no convincing proofs have been established. Other drugs also have produced arterial lesion.

High blood pressure in man has, from time immemorial, been regarded as a prime factor in the etiology of arterio-sclerosis. Practically all of the agents used in producing experimental lesions have blood pressure raising properties. Lissauer, however, failed to produce lesions in rabbits injected during long periods of time with caffeine. This agent increases blood pressure, but not so markedly as does adrenalin.

The fact, however, that adrenalin produces one type of the disease and barium chloride another would seem to indicate that there is a specific toxic action in conjunction perhaps with the increased blood pressure.

For the other types of the disease we are left with the causes culled from the text-books, as senility, alcohol (which Cabot denies, however), gout, chronic nephritis, rheumatism, typhoid fever, muscular exertion, etc.

As a result of arterio-sclerosis there result lesions in various organs, notably heart, brain and kidneys. Enderitis obliterans causes degeneration in all these organs. In the heart myocarditis, heart scars, and even acute degeneration with rupture. In the kidneys atrophy of the parts supplied by the obliterated vessels results in flat, shallow depressions on the surface which are so very characteristic. In the brain small areas of softening frequently result.

In all types of the disease if the lesions are extensive marked hypertrophy of the left ventricle is found.

In the atheromatous type aneurisms, miliary or massive, are of great frequency and to the rupture of former occurring in the brain is due most of the apoplexies of the aged.

ARTERIO-SCLEROSIS.*

BY JOSEPH M. KING, M.D., LOS ANGELES, CAL., LECTURER ON MEDICINE, COLLEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA.

In bringing before you at this time the symptoms of Arterio-sclerosis I do not desire to enter into a general discussion of the manifestations of advanced arterial degeneration; nor yet to take up your time with a review of its senile forms; but rather to call your attention to the early symptomatology of the pre-senile forms, in which cases, by early diagnosis and prompt hygienic treatment, we may be able to do much to stay the progress of the disease.

Meigs calls attention to the fact that "Almost nothing is known of clinical symptoms which may result directly from disease of the veins or arteries" and "that extensive disease of the blood vessels may exist," and yet good general health be maintained for long periods."

But these remarks apply more fully to the senile type of the disease than to the pre-senile.

In the senile type, progressing regularly and slowly, with a tendency toward greater involvement of peripheral vessels, and similar changes involving the body as a whole, the process seems more like one of normal involution; but in the type occurring in younger subjects the condition seems more distinctly pathologic, with a greater tendency toward central lesions. These cases also seem likelier to cause grave functional troubles with more disturbance of health, and to run a more rapid course.

In attempting early diagnosis we must not only look to the condition of the blood vessels and the heart, but also to its causative factors, and to such digestive, nervous, renal, ocular and circulatory manifestations as it may cause.

Etiology has such a particular bear-

ing from the standpoint of early diagnosis that careful inquiries into the habits, previous history, and mode of life of the individual are very important.

Disturbances of digestion with gradual loss of weight are frequently among the early symptoms. Gastric and intestinal digestion not only becomes slower, but the patient is not able to digest so large a meal; constipation is the rule, abdominal colic may also appear; and auto-intoxication from fermentation, with gaseous distension and consequent cardiac embarrassment is frequent.

Schrötter has pointed out that these symptoms may be due to diminished intestinal blood supply, with consequent diminution of function, and are probably analogous to angina due to ischemia of the myocardium from coronary disease.

The patient, too, seems to have lost vitality and to have a decreased resistance to infections, so that there is a tendency to repeated slight attacks of infectious diseases, as for instance la grippe or acute bronchitis, with impairment of health out of all proportion to the severity of the attack, and very slow recovery, and often a tendency to neurasthenia.

Nervous manifestations are also often among the early symptoms, and sometimes dominate the picture. Dizziness, dyspnoea, or cardiac irregularity, with faintness, are prone to occur in overheated or illy ventilated public halls.

Irritability, impaired memory, with increasing difficulty for mental work, and slight hesitancy in speech, especially when excited are common symptoms. Most important of all is persistent insomnia.

The examination of the urine also helps us to an early diagnosis. The pa-

^{*}Read before the Southern California Medical Society, December 4, 1907, at Riverside, Cal.

tient usually passes an increased amount during the night. Variability in the quantity excreted and its specific gravity, without a corresponding variability in the amount of liquid consumed is suspicious. This is best detected by the great difference which often occurs in specific gravity between morning and evening specimens. If the urine is closely watched in these cases, traces of albumin will occasionally appear.

The early eye symptoms are also of great importance, as was emphasized in a paper read before this society one year ago by Dr. A. L. Macleish. An opthalmoscopic examination made by a careful oculist will often disclose an increased tortuousness of the smaller retinal vessels and their terminal twigs, with more or less bending of the vessels at their crossings.

As the circulation in the retina is usually a terminal one without collateral anastomoses, evidences of degenerative processes in the retina are observed around these vessels; in other words, small patches of retinitis of slight intensity.

This is probably all of the *early* eye symptoms (although more marked ones occur in later stages of the disease), but they are extremely suggestive.

De Schweinitz divides the changes into (1) Suggestive, and (2) Pathognomonic, classing as suggestive:

(a) Uneven calibre of the vessels; (b) Undue tortuousness; (c) Increased distinctness of the central light streak; and (d) An unusually light color of the breadth of the artery.

His pathognomic symptoms are:

(a) Changes in the size and breadth of the retinal arteries so that they look beaded; (b) Distinct loss of translucency; (c) Alternate contractions and dilatations in the veins; and (d) Most important of all, the indentation of the veins by the stiffened arteries.

Moderate circulatory disturbances complete the picture. Of course, with-

out cardio-vascular symptoms a true diagnosis is not possible, but in the early stages they may not be very marked.

About the first auscultatory phenomenon noticed is prolongation of the systole and first sound of the heart, due, doubtless, to the increased resistance of arteries whose elasticity is diminished.

Often, also, the patient presents a pallid, flabby appearance, looking anaemic, although no true anaemia may exist.

This symptom occurs more frequently at later stages, although it is occasionally seen early, and is probably due to contracted vascular channels.

Von Neusser looks upon it as being caused by unequal distribution of the blood, with hyperemia of the abdominal vessels (due to irritation of the vagus depressor fibres, or else to paralysis of the splanchnic vaso-motors), with complemental anaemia of the skin and brain, possibly augmented by partial vaso-constriction.

Paroxysmal sweating with slight puffiness under the eyes appears occasionally in some cases.

Increased blood pressure has been looked upon as one of the constant symptoms. Whether this is true in the earliest stages is questionable. Stengel is convinced that in these earliest stages there is decreased tension with temporary elevations, and that continued hypertension never exists at this time, he being disposed to believe that the earliest pathologic condition is loss of elasticity in the vessels, due to toxic degeneration of the vessel walls, and not to spasm caused by these toxic agents.

Of course, when the disease has progressed to what might be termed a middle stage, the heightened blood pressure, palpable arteries, and hypertrophied left ventricle with accentuated aortic second sound are, as Osler has pointed out, pathognomonic, and from

this time our appreciation of the patient's true condition usually begins.

The subsequent history varies greatly, depending on what system or portion of the body is most involved. But, in general, all cases may be grouped as either: cardio vascular, nervous, renal.

I shall not weary you with a detailed recital of their well-known symptoms.

the cardiovascular type, changes in the heart depend greatly on whether the coronary arteries are involved in the sclerotic process. If they remain free, the cardiac nutrition is well maintained, and simple hypertrophy is. at first, the only change. Later, when this is followed by dilatation, the picture is one of organic mitral insufficiency and is usually so diagnosed. Under treatment, however, the apical systolic murmur may disappear, and the physician realizes that the condition is a relative and not an organic insufficiency.

When the coronary arteries are involved, the nutritional disturbances give rise to chronic myocarditis, with irregular or intermittent pulse, shortness of breath, pallor, loss of strength often with frequent gastralgic attacks, and the patient seems prematurely old. the case advances cardiac asthma and in some instances vertigo with pseudoapoplectic seizures are seen. If a patient has frequent attacks of what seem to be gastralgia, he should be carefully examined for signs or symptoms of arterial degeneration, as these seeming gastralgic attacks may be the initial symptoms of a true angina pectoris.

Among nervous symptoms not already mentioned the attacks of transient hemiplegia, and more especially aphasia, lasting but a day or two are very characteristic and interesting. Possibly they are due to spasm of the arteries.

The renal form usually manifests itself by long continued occipital pressure and headache and a sense of fullness of the neck.

Granular or epithelial cast are persistently present in the urine, with traces of albumin, and later apoplectic or uraemic symptoms may supervene.

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ARTERIO-SCLEROSIS.*

BY THEODORE G. DAVIS, M.D., LECTURER ON MATERIA MEDICA AND THERAPEUTICS, COL-LEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA.

Discussion of the treatment of arteriosclerosis depends upon what we understand by the term sclerosis as well as upon associated conditions. Of late years the term arterio-sclerosis has been used by writers upon the practice of medicine to include atheroma with or without calcification; hyaline degenerations with or without calcification and fibrosis either reparative or proliferative. Now from the viewpoint of a practical physician who is called upon to direct the management and treatment of such cases, a patient with atheroma, which has or has not become calcified is very different and demands vastly different treatment from a patient whose elastic tissues have been replaced by connective tissue (which may occur during the stasis induced by anemia-impaired nutrition, diseases or drugs favoring vaso-dilation, muscular insufficiency and deficient oxidation) or one who has had the calibre and clas-

^{*}Treatment of Arterio-Sclerosis (being part of symposium arranged by Dr. Jos. M. King and read at Riverside. December 5, 1997

ticity of the arterioles diminished by a proliferation of the fibrous tissues during the progress of infectious disease, as entero-colitis, typhoid fever, pyocyaneus, or staphylococcic infections, syphilis and the like.

I desire to impress one fact upon you: atheroma is a condition associated with mental and muscular over-work-skeletal, cardiac and arterial; fibrosis is a condition developing during a comparative stasis, a period of muscular insufficiency. True it is, one may follow upon the other, pathologists find them associated, but their causative factors are absolutely opposite conditions. Until we, as therapeutists, recognize this fact, until physiological histologists make clear to us the interdependence of cells, the manner in which the secretion of a cell or group of cells influences other cells, or even the manner in which cells cement themselves to form tissues by the intracellular substances produced by their own intercellular activity, until physiological and pathological chemistry makes clear the changes that occur in these substances during disease, our treatment must be theoretical, unscientific and unsatisfactory, in fact empirical. Treatment must be guided not only by the symptoms presented at the time, but by the history, particularly by the etiological factors, by the part or parts of the circulatory system chiefly involved, and by the condition of other parts, especially the heart and kidneys.

I have come to place great reliance upon the sphygmomanometer, as a guide to the adequacy of the circulation. It must be used repeatedly with the patient in different positions, after exercise and when at rest. Used intelligently it is most valuable in directing our therapy.

As to rest, it is important that a patient with atheroma should have rest and quiet, avoid all excitement and measures or medicaments which may

suddenly raise blood-pressure. It is equally as important that patients suffering from arterio-capillary-fibrosis should have judicious, carefully regulated exercise by which the tone of the cardiac, arterial and skeletal muscles may be improved. Diet should be regulated to this end. I do not think it half as important what a patient shall eat, if it is assimilated, as is the quantity especially of fluid they ingest. Drinking of water and milk as well as feeding of "sloppy foods" is greatly overdone, the vessels are overfilled and the work of the heart and kidneys 'greatly increased without really presenting proper nutritive material. Vegetarian, fruit, cereal and other "diet cranks" have done great mischief. Proteids are necessary, animal proteids are easier of digestion and assimilation than vegetable proteids, and do not necessarily produce excess of urates or uric acid, which depends principally upon the activity of oxidative processes.

I wish I could leave atheroma out of this discussion. If calcareous deposits have occurred they are irremedial, and they frequently accompany atheromatous degeneration, almost always un-. less the abscess rupture into a vessei and the scar heals by connective tissue proliferation. If atheroma is present, reduce blood pressure by aconite or veratrum viride and secure rest of body and mind. Chloral, opium or morphine may be used cautiously as required. Chloral lessens blood pressure very effectually. Opium or morphine greatly lessen the nervous apprehension and mental distress; and being eliminated by the alimentary tract it affects the kidneys but slightly, notwithstanding the general distrust as to its use. Bromides are of considerable service in the nervous.

Would I use the nitrites? Only for temporary effect. Nitrites given in the large doses advised by Osler, Stewart and others are most illogical, unscien-

tific and harmful, if continued over any considerable period of time. To be sure they dilate the peripheral vessels, but it is a paralytic dilatation of short duration which, continued, produces stasis, interferes with oxidation and by its poisonous decomposition products, aceto-nitril or menthylcyanid, favors degenerative processes, especially fibrosis of the vessel walls.

There is no drug which will reduce blood pressure as surely and effectually as chloral hydrate, but we do not often use it because of the degenerations of cells which it produces. However, I would as soon think of using chloral continuously as I would of using nitroglycerine continuously. The best remedy, if we could control the quantity used, is alcohol. There is no other drug which will dilate the peripheral vessels and lessen blood pressure as effectually with so little untoward after-effects as alcohol in proper doses, and there is no doubt in my mind that the appreciation of this by man, civilized or uncivilized, accounts for the almost universal use of alcoholic beverages. It is the abuse of alcohol, as of any other drug, that is to be deprecated.

Two drugs long used empirically yield excellent results-iodides and digitalis. Iodides should be given over a long period of time in small doses, 3, 5 or 10 grains three times daily according to the susceptibility of the patient. Their effect is increased when associated with an alkali, of which I prefer sodium citrate, or bicarbonate, best given in considerable milk or water. Their use should be intermitted about one week in the month. Sodium phosphate used for its laxative and eliminative effects also lowers blood pressure and is valuable in the elimination of urates. The iodides of themselves in full doses raise blood pressure, but in small doses their effect upon the glandular secretions, especially the thyroid, is to lower blood pressure and they appear to favor the

absorption or to lessen the production of fibrod tissue and its antecedents.

Digitalis, in small doses, favors and improves the nutrition of muscle cells, skeletal, arterial and cardiac, but the dose and effect should be carefully watched, but when properly adjusted may be continued for a long period with advantage.

There are patients with whom strophanthus or apocynum appear to agree better—strophanthus in a weak, rapid heart with high blood pressure, apocynum when ascites or edema is present, especially when the abdominal veins are distended and the right heart is markedly insufficient; here, if the lungs are coematous, squills is of service.

Do not forget the value of belladonna or atropin, when bradycardia is present, or of aconite, cactus, opium and arsenic iodide for tachycardia, or of aconite with small doses of the iodides and citrates with full doses of sodium phosphate in cases of arterio-capillary fibrosis where hypertrophy of the cardiac muscle has occurred, and the blood pressure is high.

THE "SUN BROTHERS."

Some of the inhabitants of Germany recently experienced "religion." They styled themselves "Sun Brothers," and believed in single blessedness. In order to avoid the evil contamination of married life they fled to the island of Kabakon in the Bismarck Archipelago, in the Pacific Ocean, there to live the simple single life, subsisting on fruits, nuts, etc. All clothing, even the historical fig leaf, was abandoned. These devotees consisted largely of authors, artists and "philosophers." In the course of their first experience, one was killed by the natives of the island, two died from exposure and the rest of the "philosophers," artists and authors hied themselves back to Germany as rapidly as possible.



Established in 1886 by
WALTER LINDLEY, M.D., LL.D., Editor and Publisher.
This journal endeavors to mirror the progress of the profession of California,
Arizona and New Mexico.

DR. WALTER LINDLEY, Editor.
DR. F. M. POTTENGER and DR. GEORGE H. KRESS, Assistant Editors.
DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW,

Address all communications and manuscripts to
EDITOR SOUTHERN CALIFORNIA PRACTITIONER.
Subscription Price, per annum, \$1.00.

1414 South Hope Street, Los Angeles, California.

EDITORIAL

CEREBRO-SPINAL MENINGITIS.

Much cannot be said with definiteness about the prophylaxis of cerebro-spinal meningitis. That it exists as sporadic cases, so-called, as well as in endemic and epidemic form is known. The causative bacteria, diplococcus intracellularies meningitidis of Weichselbaum are conceded at the present time.

ETIOLOGY.

But just how the infection takes place, as to how it is transmitted from one individual to another, we have no better knowledge than we had a few years ago concerning the transmission of the vellow fever infection; before it was discovered that an intermediary host exists. Malaria and plague are also examples of recent discoveries in this same direction and therefore something is thought to be definitely known as to a working line to be followed in the prevention of these infectious diseases. Cerebro-spinal meningitis is probably contagious, but just how it is transferred from the afflicted individual to the healthy person is not definitely Hunt (Anders' Practice of known. states it seems to Medicine) an inhalation disease. Anders in his recent volume makes the statement that "it is certain that the germ may enter the meninges (a) by blood metastatis, (b) by direct extension of an inflammatory process (e. g. mastoiditis)." Cases have been recorded in which the infection seemed to be transferred directly from one to another. The difficulty of absolute proof of such a transference is readily apparent.

PROPHYLAXIS.

With our present limited knowledge,

therefore, it seems highly advisable to isolate all cases and to thoroughly disinfect all the excretions, to guard the respiratory tract of all exposed individuals, by making aseptic as far as possible the mucous membranes of the upper respiratory tract. Farther than this little can be said at the present time concerning the prevention of the disease.

DIAGNOSIS.

Regarding the early diagnosis little difficulty should be experienced in the typical forms or in time of an epidemic. The abrupt beginning with fever, abnormal pulse, severe headache, projectile vomiting, chill, possibly a convulsion, pain in the back and upper portion of the spine, to be soon followed with more or less rigidity of the nucha, presents a picture which should readily be suggestive to the physician. The existing leucocytosis and the diplococcus meningitidis found either in the secretions from the maso-pharynx or the fluid obtained by Quincke's lumbar puncture clinch the diagnosis.

In the fulminant variety where death ensues within a few hours after the onset, unconsciousness or coma following the initial convulsion, as in a case recently occurring in Los Angeles, and in the atypical forms where many of the characteristic symptoms are wanting, the diagnosis becomes much more difficult unless an epidemic exists in the community.

Photophobia, projectile vomiting, excruciating headache, pain in the cervical or lumbar region, myalgia, increase of pain on rotation or flexion of head, leucocytosis and later development of Kernig's sign are all symptoms that should excite our suspicion. Any one of this train of symptoms may exist in other conditions, but when several of the number are combined with more or less fever and an abnormal pulse we certainly should not forget the possibility of this dreaded disease.

"Abortive," "intermittent" and "typhoid" forms exist and are duly considered by most authors. In the abortive form the early symptoms may be very severe and yet convalescence become rapidly established, even within a few days. Here an early immunity seems to be acquired by the patient wholly independent of remedial measures. These cases have doubtless been a strong factor in the research work leading to the hope of a serum which may act as efficaciously as the diphtheria antitoxin.

TREATMENT.

Flexner, working in the Rockefeller Institute in New York has recently brought out such a serum which seems at the present time to justify the expectation. Time only can demonstrate its usefulness.

The management of the disease must vary in the individual cases and must necessarily be more or less symptomatic. The intestinal canal should be cleared out, and excruciating pain relieved if necessary by anodynes. Remember that bromides, paregoric or Dover's powder are tolerated better by children than opium or morphine. Potassium iodide may be useful if there are evidences of effusion later on. An isolated, quiet and darkened room should be provided

when possible. A well-trained nurse is not only a great aid, but a real comfort to both the family and the medical attendant. Blood examination, lumbar puncture and the use of serum are to be considered as having their proper places. Lumbar puncture, aseptically done, is now generally conceded to be a harmless procedure, is often a great diagnostic aid and may be useful in relieving pressure.

In conclusion we are glad to present the following editorial from the *New York Medical Journal*, January 25, 1908:

THE SERUM TREATMENT OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.

We have already noticed Flexner's preliminary experiments carried out for the production of a curative anti-serum for diplococcus intracellularis infection (New York Medical Journal, May 11, 1907). The serum has since been prepared on a large scale and has been used in cases of epidemic cerebro-spinal meningitis by Dr. W. S. Chase, in eleven cases, in Akron, Ohio; by Dr. L. W. Ladd, in sixteen cases, in Cleveland; by Dr. W. T. Longcope, in five cases, in Philadelphia; by Dr. Cushing, in one case, in Baltimore; and by Dr. Strain, in three cases, in New York. The serum has also been used in Edinburgh and in Belfast for the treatment of cases of cerebro-spinal meningitis.

The results of these trials of serum therapy in this serious disease have been collected by Flexner and Jobling and are published in the *Journal of Experimental Medicine*, x, I. Of the 36 patients treated in the United States,

26, or 72.22 per cent, recovered, and 10, or 27.77 per cent, died. We leave out of consideration in this review the nature of the cases, the length of time after the onset of the disease that the injection was given, whether the case terminated by lysis or by crisis, etc., although all these facts influence one's judgment of the the value of But if a treatment can a recovery rate of over 70 per cent of cases irrespective of severity and of the duration of the infection, in a disease in which, by other methods of treatment, the recoveries form from 20 to 75 per cent of the cases, depending upon the severity of the epidemic, surely it is worthy of serious consideration and of careful and extended trial.

This serum is injected directly into the subarachnoid space after the withdrawal of cerebro-spinal fluid by means of lumbar puncture. The quantity injected should not at present exceed thirty cubic centimetres. It seems desirable to withdraw an amount of fluid equal to that to be injected; the injection should be made slowly and carefully, and the serum should be warmed before it is injected. Until it is wanted for use, it should be kept in the refrigerator. The injection should be repeated daily for three or four days. As in all diseases in which serum treatment is applicable, the earlier the treatment is begun the better will be the The reasons for this should now be so obvious to physicians that we deem it unnecessary to repeat them G. L. C. here.

BARLOW MEDICAL LIBRARY.

The Barlow Medical Library of Los Angeles has now been open to the public for just one year. It is meet, therefore, that a brief survey be made of the work accomplished during this time.

The donor of this splendid building, when he presented the structure to the profession, upon which was spent over \$30,000, had in mind a place where the profession and medical students of this city and the Southwest might turn when they desired to investigate special subjects.

To aid in the attainment of this end, the College of Medicine of the University of Southern California presented its library of several thousand volumes and to this nucleus have been added hundreds of other books during the year, gifts of local and other friends of the institution.

The Board of Directors, elected by the patron members (those who paid \$25 a year to the support of the institution), has centralized its energies during the last twelve months, largely upon constructive details concerned with cataloging and allied work. As a result of their own and the librarian's labors, it is now possible for physicians of this region to obtain a fairly representative collection of literature on any topic which it may be desired to investigate.

We all of us should appreciate this possibility more than we do and should give practical expression to our interest not only in membership affiliation, but better by actual use of the privileges offered by this institution.

All the well-known American and

the great majority of foreign journals are now at the disposal of every one of us. If we will but deign to use the facilities offered, both the Library and we ourselves will be correspondingly benefited.

The Directors will be glad to have suggestions on the needs and management of the Library. The members of that Board are anxious to know what are the desires of the general profession in this work and feel that they are in office only to fulfill the purposes of the Library and the desires of their professional colleagues.

One thought that has occurred to us on more occasions than one relates to the hours during which the Library is open. The present hours are from 10 a.m. to 5 p.m. These are difficult hours for many men in practice to leave their offices. We have wondered whether or not several evening hours could not be used, at the expense, if necessary, say of the morning hours.

Another thought and hope that has been flitting through our mind is the belief that the scope of the Library could be greatly enhanced if either in the rear or on an adjoining lot, an auditorium-museum building, could be erected. This building need not necessarily be of expensive construction. In such a building the medical societies could hold their meetings and under such conditions, we have not the slightest doubt both the Library and the museum would make rapid progress. And we doubt not, also, but the advantages which would accrue to the medical societies interested would be real and great. Particularly would this be

the case, if arrangements for buffet lunches were provided, so that the scientific development and interests of the profession could go hand in hand with better social and fraternal affiliations.

There are men in our profession who could make these and analogous ends a reality and we commend to their respectful and loyal consideration, the contemplation of some such forward steps as above indicated.

LINDLEY MURRAY'S MOTHER.

The reproduction in the January Southern California Practitioner of the book-plate of Lindley Murray, together with a biographical sketch of the philanthropic botanist and grammarian, has brought the following from Prof. J. W. Redway, the noted geographer. We said that Lindley Murray did not participate in the war of the Revolution because he was a member of the Society of Friends but Prof. Redway says it was because he was a loyalist:

Editor Southern California Practitioner.

Dear Doctor: I was much attracted by the book-plate and accompanying note concerning Lindley Murray. While Murray himself had no part in the War of the Revolution, being a staunch loyalist, his good mother had warm regard for General Putman and also the American cause. While Putman was making ready for the retreat that left New York in the possession of the British, he was greatly delayed; and had General Howe

made an effort when he crossed East River at what is now 34th St., he might have thrown a column across Manhattan Island, and hopelessly penned Putnam, who was still in the lower part of the island. Washington tried to impede Howe's advance, but the troopsraw New England militiamen-got badly rattled and fled. Washington sent a messenger to Mrs. Murray, who occupied the solitary farmhouse in the neighborhood, to warn her of Howe's approach; he then hurried on. Mrs. Murray was possessed of a generous share of woman's wit. As soon as the view of Howe's column was in sight, she sent her negro servant to invite the general and his staff to luncheon. The column was halted and Mrs. Murray entertained her guests most joyously for more than two hours, with Catawba wine. Sopus ale, chicken stew, and everything else that a charming hostess could find in a farmhouse larder. And while all this was going on, Putnam's column filed along the shore of the Hudson River until he reached the right wing of Washington's army. Magnificent brownstone residences and more magnificent hotels now cover the old farm on Murray Hill, but nothing there is so magnificent as the tactful wit of the one woman who saved 4,000 menalmost a quarter of Washington's army -from capture. The mother, rather than the son, has left the greater mon-Sincerely, ument.

REDWAY.

EDITORIAL NOTES

Plans are being prepared for a hospital in Pomona to cost \$50,000.

Dr. E. J. Cook of Los Angeles has returned from a hurried trip to Chicago.

Dr. H. Reese, formerly of Stillwater,

Oklahoma, has located in Douglas, Arizona.

The wife of Dr. F. H. Hadley, of Los Angeles, died suddenly January 13 of la grippe.

Dr. Frank Titus, of San Francisco, died of heart disease in an infirmary in Paris, Texas.

Dr. H. D. Niles of Salt Lake City, has been enjoying a vacation in Southern California.

Dr. G. Kay Johnston, of Santa Maria, Cal., has returned home after an extended vacation.

Dr. F. C. E. Mattison was, on January 14, elected president of the Overland Club of Pasadena.

Mrs. Frances B. Coffey, mother of Dr. Titian J. Coffey of Los Angeles, died January 18th.

The physicians of Albuquerque are urging the importance of a Detention hospital for that city.

Dr. W. Harriman Jones has been appointed health officer of Long Beach for the third successive year.

Dr. Philip M. Savage, of Chino, Cal., has recently joined the Los Angeles County Medical Society.

Dr. J. W. Trueworthy of Los Angeles is now living in his elegant new home, 676 Berendo Street.

There are now several European societies for the destruction of rats. The latest was organized in London.

Dr. C. Guy Reily has located his offices in the Broadway Central Bldg., 434 South Broadway, Los Angeles.

Three and a half million cords of wood are used annually in the United States in the manufacture of paper.

Dr. Wm. J. Lewis has been appointed County Physician of the Fourth judicial township of Santa Barbara County.

The California State Board of Medical Examiners will hold their next examination in San Francisco on April 7th.

Tyzzer (Journal of Medical Research, November, 1907) reports sixteen new cases of spontaneous malignant tumors in mice. Dr. C. A. Mackechnie, surgeon for the C. R.Y. & P. R. R. at Alamos, Mexico, has decided to locate permanently there.

Dr. F. M. Bruner on Jan. 13th delivered an address before the Monday Club of Santa Ana. Dr. Bruner's subject was "Medical Ethics."

Dr. D. C. Strong, superintendent of the San Bernardino County Hospital has been instructed to vaccinate the children of the San Bernardino public schools.

Dr. J. A. McGarry, of Los Angeles, has resigned as pension examining surgeon at the Soldiers' Home after having served in that position nine years.

Drs. Robert W. Haynes, Alfred Fellows, John R. Haynes and H. H. Koons have removed their offices to the Union Trust Building, corner 4th and Spring streets.

The Eastman Sanitarium of Santa Barbara elected the following officers: President, Dr. M. E. Eastman; vicepresident, J. H. Eastman; secretary and treasurer, E. M. Drake.

Dr. Ernest B. Hoag, medical examiner of the public schools of Pasadena, recently addressed the Child Study Circle, and Miss Hillis sang: "Father, Breathe the Evening Blessing,"

Dr. Woods Hutchinson, in an earnest appeal for open windows at night, says: "No air that ever blew outdoors is so dangerous or poisonous as that inside a bedroom with closed windows."

Dr. Edith Claypole has generously offered to take the directorship of the laboratory of the Pasadena Hospital without charge. Dr. Claypole will devote two hours daily to this work.

Dr. T. C. Robinson of Grass Valley, California, visited friends in Los Angeles during January, en route East. Dr. Robinson will spend six months doing Post Graduate work in New York City. Dr. A. W. Taylor of Nordhoff, Ojai Valley, is High Priest of Corinthian Chapter Royal Arch Masons of Santa Barbara. His brothers recently presented him with a beautiful jewel emblematic of his rank.

The Right Rev. J. Mills Kendrick, D.D., Bishop of Arizona and New Mexico, has established a camp and sanitarium for the tuberculous at Phoenix. He asks for \$1,000 with which to buy adjacent land.

Dr. and Mrs. Geo. E. Tucker entertained the Riverside County Medical Society on the evening of January 13th. Dr. Thos. R. Griffith read a paper on "Diseases of the Tonsils." The evening closed with a supper.

Dr. Franklin Ferry, a graduate of Jefferson Medical College, class of '87, died in Pinos Altos, near Silver City, New Mexico, from tuberculosis. He was 48 years old and formerly practiced in New Paris, Bedford County, Pa.

Dr. E. H. Skipworth, age 68,, died in El Paso, January 4th, of pneumonia. Dr. Skipworth had practiced fifteen years in Las Vegas, then ten years in Roswell, New Mexico. The last two years of his life were spent in Mexico.

The recent investigation of the State Hospital for the Insane at Patton, San Bernardino County, has resulted in the complete exoneration of Dr. Williamson and his corps of physicians. Five of the attendants were criticised in the report and have been discharged.

Dr. Sajous, having completed his stupendous work on the "Internal Secretions," has resumed practice. His office is 2043 Walnut street, Philadelphia. Dr. Sajous limits his practice to diseases of the nose, throat and lungs, and disorders which relate to the ductless glands.

The Presbyterian Church intends to have a national sanatorium for tuberculosis in New Mexico. Albuquerque, Silver City, Santa Fé, Las Vegas and Alamogordo have offered a bonus of forty acres of land in the event of the institution being located in their respective cities.

The following were recently elected members of the Los Angeles County Medical Society: Dr. Irving R. Bancroft, 416 Byrne Building; Dr. George M. Stevens, 2405 South Hoover street; Dr. William W. Sherer, 519 Lissner Building; Dr. Thomas J. Orbison, Auditorium Building.

Dr. R. S. Lanterman recently resigned as coroner of Los Angeles County and the position was offered Dr. D. C. Barber, who is now county physician and superintendent at the County Hospital. Dr. Barber declined and Mr. Calvin Hartwell, a very able and honorable layman, was appointed.

Drs. Norman Bridge, W. Jarvis Barlow, F. M. Pottenger and Stanley P. Black have been appointed delegates to International Congress on Tuberculosis that is to meet in Washington, D. C., September, 1908. Dr. N. K. Foster is chairman and Dr. F. M. Pottenger is secretary of the California committee.

The physicians of Roswell, New Mexico, held their annual banquet on January 9th at 10 p.m. at the Grand Central Hotel. Dr. J. W. Kinsinger, the president elect, was toastmaster, and the following were present: Drs. W. C. Buchly, C. M. Yates, E. M. Fisher, C. F. Beeson, Bradley, Presley, Phillips, Fisher. Casburn and Joyner.

Dr. B. L. Nichols died at his residence in Pomona, California, January 26th. He was born at Enosburg, Vermont, March 28, 1824, and graduated from Vermont Medical College at Woodstock in 1842 and came to Pomona in 1886, where he was up to the time of his death president of the Pomona Land and Water Co.

Dr. E. R. Smith, the Los Angeles surgeon, has purchased a home near

Alhambra, ten miles out of the city. He will maintain his offices as usual in the Bradbury Building in association with his son, Dr. Rea Smith. Dr. Smith will also continue his surgical work at the California Hospital, of which he was one of the organizers.

We have received the following reprint from Dr. H. Lissner, of the Lissner Building, Los Angeles: "Die Technik der Opsoninbestimmung und ihre Anwendung bei Lungentuberkulose. Von Dr. René Bine und Dr. Henry Lissner in Heidelberg. Sonderdruck aus der Münchener medizinischen Wochenschrift, No. 51, 1907. (Verlag von J. F. Lehmann in München.)"

On January 8th at the regular meeting of the Bernadillo County Medical Society, Albuquerque, Dr. M. K. Wylder, on behalf of the Society, expressed regret that Albuquerque was to lose Dr. J. B. Cutter. Dr. Wylder then presented Dr. Cutter with a handsome cut-glass bowl and expressed the hope that happiness and prosperity would attend him in his new Los Angeles home.

The Cochise County Medical Society at its annual meeting in Bisbee on January 9th elected the following officers: President, Dr. J. E. Bacon, of Tombstone; first vice-president, Dr. E. W. Baum, of Bisbee; second vice-president, Dr. F. T. Wright, of Douglas; third vice-president, Dr. G. A. Bridge, of Bisbee; secretary and treasurer, Dr. E. S. Godfrey, Jr., of Lowell; censor, for three years, Dr. A. R. Hickman, of Douglas.

Dr. D. H. Carns, city physician of Albuquerque has been having an interesting time refuting charges of Dr. James H. Wroth and Dr. M. K. Wylder. Dr. Carns graduated from the Western Pennsylvania Medical College of Pittsburg in the class of 1894. Dr. Wroth graduated from the University of Pennsylvania in 1878. Dr. Wylder graduated from the Medical Department of Wash-

ington University, St. Louis, class of 1901.

At the meeting of the Territorial Board of Health held in the city of Santa Fe, January 13, 1908, Dr. T. B. Hart of Raton, presiding; the following were licensed to practice medicine in New Mexico:

Dr. G. H. Branham, of San Jon; Dr. Margaret Cartwright, of Albuquerque; Dr. Henry O. Conaway, of Farmington; Dr. Henry Gray, Aztec; Dr. Chas. C. Hendrick, Albuquerque; Dr. Joseph P. Jones, of Carlsbad; Dr. Andrew W. Moore, Stanley; Dr. Daniel R. McCormick, of Albuquerque; Dr. Marcellus McCreary, of Magdalena; Dr. Bertrand M. Potter, of Melrose; Dr. George W. Sammons, of Farmington; Dr. William P. Schelly, of Hagerman; Dr. J. Scott Ward, of Albuquerque.

The San Diego Daily Sun says: "Dr. D. Gochenauer is not leaving San Diego permanently when he goes to Los Angeles to assume the managership of the Angelus Hospital. The appointment is for one year only. Dr. Gochenauer said Friday: 'I am not severing my connections with San Diego. My residence and my interests remain unchanged. I will keep my residence and my business interests in San Diego and always boost for the city in which I have lived twenty-one years of my life.'"

We have received from the author, Alembert W. Brayton, A.M., M.D., Indianapolis, the following reprint: Blastomycosis and Its Congeners; Report of Eight Cases Observed by the Writer in Indiana. And also a reprint from Dr. Nelson D. Brayton, Government physician to the Isthmian Canal Commission, Panama. Syphilis Past and Present; Its Birth and Origin; Literature, Symptomatology and Curability; Its Relation to Marriage, etc. Dr. A. W. Brayton, Indianapolis, would doubtless send these reprints to any physician on request.

Dr. Henry David Fanning, age 29, of San Francisco, died in Tucson, January 28th, of tuberculosis. Dr. Fanning graduated from the Medical Department of the University of California, in the class of 1902. He was engaged to a young nurse in the hospital in which he had been interne. They were married the day before he left for Arizona. When they reached Tucson they went immediately into a tent, but the Doctor only lived three weeks. The Knights of Columbus escorted the body to the station. A sad honeymoon for the devoted young bride.

At the last session of the Rigsdag a law was enacted for the adoption of the metric system in Denmark. This law was approved by the King on May 4. 1007. The following are its chief provisions: The unit for the Danish system of measures shall be the meter (39.37 inches). The unit for the Danish system of weights shall be the kilogram (2.2 pounds). Other measures and weights shall be derived from the above-named units. The length of the meter and the weight of the kilogram shall be fixed by the standard meter and the standard kilogram sent to Denmark from the international bureau of weights and measures in Paris.

The San Diego Union says: "Dr. D. Gochenauer, who will leave shortly for Los Angeles to assume active charge of the Angelus Hospital in that city, stated last night that the new arrangement will in no way affect his interests in this city, all of which he will retain. Dr. Gochenauer was active in establishing the Agnew Sanitarium and has been president of that institution since its founding. He will continue to hold this presidency and will be in San Diego at frequent intervals, although of necessity making his residence in Los Angeles. 'I shall always regard San Diego as my permanent home, however,' said the doctor last night, 'and

will never concede that there is another spot in the world which can equal it."

According to the wishes of Viceroy Chang Chitung a college of medicine is about to be opened at the Chinese capital. Preliminary plans include the following measures: As the school is to afford the highest medical training for the young men of the entire Empire. it shall not employ men on its faculty who do not come with the nighest possible recommendations. In accordance with Chinese ideas the course is to be divided into three years of old Chinese medical practice and six years of modern western training. At the end of these nine years there is to be a thorough examination and then three more years of study and trial practice shall be demand before the students shall be qualified doctors. This examination must also be passed by people who are now practicing on certificates from existing medical schools.

The Los Angeles Daily Times of January 28th says: "At the annual meeting of the California Hospital the following were elected to the board of directors: Dr. F. T. Bicknell, president; Dr. E. R. Smith, vice-president; Dr. W. W. Hitchcock, treasurer; Dr. Walter Lindley, secretary; Dr. W. W. Beckett, Dr. Geo. L. Cole, Dr. H. Bert Ellis, Dr. John R. Haynes, Dr. Carl Kurtz and Dr. M. L. Moore. These are the same officers elected at the organization of the hospital ten years ago. In the ten years since the organization, a total of 15,478 patients have been treated in the hospital. During the last year 2,440 patients were cared for. Each patient cost the hospital an average of \$3.05 per day during the last year. This is nearly one-third more than each patient cost four years ago. The increase is attributed to the advance in the cost of living."

Hashish, that strange drug which has given our language its word assassin—

a man so frenzied by the drug that he accomplishes murder—and which is used by the Persians, Turks, and Egyptians in a manner akin to the use of opium by the Chinese, is the product of a plant grown in large quantities in the Peloponnesus (southern Greece) in the district about Tripolitza. The plant grows to a height of about 4 feet and its branches are thickly covered with small leaves and studded with tiny seeds.

The drug has the power of inducing sleep and producing pleasant and fantastic dreams. Continued use of hashish renders its devotees wild and restless, and results in a complete wreck of their mental and physical constitution. For this reason the Egyptian Government has prohibited the importation of the drug, and recently entered into a convention with Greece to prevent its exportation from there to Egypt, where the consumers of hashish are very numerous. The drug is practically never used in Greece, but is now exported to the various ports of England, Austria, France, and Italy, and from there much, no doubt, ultimately finds it way to Egypt.

The Southern California Practitioner has for twenty-two years upheld the highest standards for the medical profession of California. This has been done through loyalty to the medical profession and its best interests, much of the time at personal financial loss. "In spite of this endeavor, covering nearly a quarter of a century, the California State Journal of Medicine for January has an editorial on Dudley Tait, from which we quote as follows:

"To speak with thinly veiled sarcasm of one who has worked hard and long and conscientiously for the benefit of the people and the betterment of a learned profession, does not reflect any considerable degree of credit upon the critic. It is therefore with no degree of pleasure that one reads an editorial in

the last issue of the SOUTHERN CALIFORNIA PRACTITIONER, entitled "Tait de Trop," for the editorial, even though it speaks highly of the work that Dudley Tait has done for the elevation of our profession, conveys its sting of sarcasm not so much in the tail as in the head."

That editorial in the Southern Cali-FORNIA PRACTITIONER for December, entitled "Tait de Trop," contains our sentiments in regard to Dudley Tait. It seems that the usually genial editor of the State Journal does not object to the substance of the "Tait de Trop" editorial, but his taste is offended by the somewhat catchy Gallic title. There was no sarcasm, either veiled or nude, in our intentions. Whatever is in that editorial that is not agreeable to our San Francisco friend was said in a purely Pickwickian sense. We always looked upon Dudley Tait as a human being full of good red blood and vitality and not as a divinity whose name was only to be mentioned in the subdued and solemn tones of an undertaker. Earthly divinities belong to mythology. Apis was a sacred bull worshiped at Memphis from the earliest period. He was conceived by a moonbeam or a flash of lightning. A house was built for him facing the east, in which for four months he was nourished with milk. When he had grown up he was conducted, at the time of the new moon, to a ship by the sacred scribes and prophets, and conducted to the Apeum at Memphis, where there were courts, places for him to walk, and drinking fountains. According to Diodorous, he was first led to Nilopolis, and kept there forty days, then shipped in a boat with a gilded cabin to Memphis, and he was there allowed to be seen for forty days only by women, who, performing in a wanton, indecent manner, exposed themselves to him. Like all the sacred animals, his actions were oracular.

MISCELLANEOUS

STATE EXAMINATIONS IN ANATOMY.

By Dr. Dain L. Tasker, Los Angeles, Cal., Member California State Board of Medical Examiners.

A German anatomist has written, "Think anatomically if you wish to be a physician." This expression has been brought to mind by my experience as an examiner of applicants to practice in this State.*

An examiner manifestly has two points to consider: first, the public, whose representative he is, and second, the applicant, who desires to serve this public in the capacity of physician. It is entirely in the hands of the examiner to decide what sort of a test to give. Evidently he will be guided by his own conceptions of what constitutes a satisfactory or working knowledge of his subject and this will show in the questions he asks. Furthermore, if he be actuated by any ideals concerning the trend of medical education, these might also be found unconsciously interwoven in the phrasing of the questions. Since we are examining people possessing varied views about what constitutes good practice and since our law is not concerned so much about what a man believes as what he knows, our questions should deal with practical tangible things rather than academic details long since so safely stowed away that we can not quickly locate them.

The old practitioner who applies for examination feels that his experience should count for much. This word "experience" is badly overworked. Everybody has experiences, but not all profit by them. It is conceivable that one's experiences are a long list of mistakes consequent upon insufficient fundamental education. Our California law has

almost eliminated that old stereotyped question, "How would you treat ——," which offers all sorts of opportunity to escape any reference to anything except "belief."

After reviewing 185 papers on anatomy during the past six months I am constrained to believe that few physicians "think anatomically." Being governed by my conviction that questions should aim to bring out the facts and the power of using them I tried to formulate them to this end. Comments upon these questions have been very diverse. I am not impelled to this writing by the comments but by the answers to my questions.

The first question, relating to the scalp, brought many fine answers showing an understanding of the relation of skin to aponeurosis and both to the periosteum. Not a few showed inability to recognize the difference between swelling under the skin and under the aponeurosis.

The second question produced more faulty answers than any other. This question was designed to bring out the reasoning powers of the applicants. It resulted in a lot of guesses. Naturally the primary curves are those which in crease the capacity of the thorax and pelvis, the rest is obvious. The character of movement in each portion of the spinal column is largely dependent on the direction of the articular processes. Judging by the answers we need more careful teaching of the anatomy of the spine.

The question on ligaments was so arranged that it seemed impossible for anyone to fail to get a passing grade. A certain loss of percentage here migh be attributed to terminology, but we take it for granted that we are examining physicians, not high school students, and hence use the well-known terms of standard authors.

^{*}As Dr. Tasker's article discusses the anatomy questions of the last examination, we have appended these questions on the next page.—[EDITOR.

So simple a question as "Locate the lymphatic glands of the head and neck" produced most astonishing evidences of lack of definite knowledge. No doubt all knew of the existence of such glands, but even the general superficial arrangement of them was not carried in mind. I call attention to these things, because it is inconceivable to me that diagnosis can be anything more than guesswork, if it is not based on an accurate working knowledge of anatomy and physiology.

Aiming to have the examination reach into all the divisions of anatomy, I formulated some questions which would bring out the applicants' knowledge of muscles and nerves. These were called "problems" in nerve distribution. first was based on the well-known appearance of the hand in progressive muscular atrophy—wasting of the interossei governed by the ulnar. Another was based on the frequently observed ptosis of the upper eyelid, another on facial paralysis involving the orbicularis palpebrarum. The answers to these problems called for exact knowledge. The most of what I received was the reverse. The distribution of the nerves is practically true to type in all individuals. It does not vary as do the blood-Physical diagnosis will be vessels. worth while when every physician bases his work on a keen knowledge of the mechanism he is working with.

The paths used by the body in all its compensating efforts to maintain circulation should be a part of our practical knowledge. The anastomoses of veins and of arteries play so important a part that the applicant may properly expect some question relative thereto.

One would naturally suppose that the questions calling for the outlines of organs like the liver and spleen would result in good answers, because knowledge of these relations form the very foundation of much of our diagnostic work concerning them. The liver was

not moved greatly out of its position, but it passed through some extreme states of atrophy and hypertrophy. The spleen travelled from under the sixth rib down to the crest of the ilium, from back of the posterior axillary line to a place in front of the anterior axillary line; even found lodgment under the liver. After reading these descriptions I no longer wonder at the widely varying diagnoses. There can be no scientific diagnosis when primary knowledge is so inexact. It is needless to go fur ther and show how treatment differs. Is there any hope of "beliefs" agreeing if we cannot learn the "common facts" upon which dogmas are supposed to be built.

Rather than ask a question, text-bookish, about something that might be answered as a pure memory test I selected the knee joint as a test of what can be felt, i. e., the applicant could refresh his memory by feeling of his own knee. Many of the answers showed that the applicant was primed with a lot of "cram material," hence came long lists of ligaments at the expense of tan gible useful knowledge of the joint.

For the benefit of those who contemplate appearing before the Board at some future examination, I suggest that they read some work on applied anatomy. There are many excellent ones. So long as it is my duty to give the examination in anatomy the questions will tend toward the practical side of the work. Among the books of practical value are: Hilton's "Rest and Pain," Eisendrath's "Clinical Anatomy."-Schultze-Stewart's "Atlas and Text-Book of Topographic and Applied Anatomy," Treves' "Surgical Anatomy," Bardeleben's "Applied Anatomy."

ANATOMY.

I. The Scalp: (a) What difference exists between the skin of the scalp and the scalp proper and how is the mobility of both affected by their anatomic

structure? (b) Why is it that cutaneous wounds of the scalp do not gape, while wounds of the entire scalp do? (c) Why is it impossible to close large cutaneous defects in the scalp by uniting the edges of the wound? (d) What are the characteristics, dependent upon anatomic structure, of an effusion of blood or of a suppuration in the scalp? Beneath the scalp? (e) Why does the skin of the scalp bleed more profusely after injury than that of any other cutaneous area? Why do large flaps in this situation adhere more readily than elsewhere? 2. The Spinal Column. Which are the primary and which the compensatory curves of the spinal column? Why? (b) Indicate the direction of the facing of the articular processes of typical cervical, dorsal and lumbar vertebrae and describe how this governs the characteristic movements of each portion of the column. 3. Give examples of (a) elastic and inelastic ligaments. (b) muscles acting as ligaments. Name three joints having interarticular fibro-cartilages. Locate the following ligaments: Orbicular, Cotyloid, Glenoid, Crucial. 4. Locate the lymphatic glands of the head and neck. 5. Five problems in nerve distribution. Name the nerve and muscle or muscle group involved in the following: (a) Abduction and adduction of the fingers. (b) Movement of the scapula forward on the thorax, as in pushing. (c) Flexion of the foot on the leg. (d) Lifting the upper eyelid. (e) Closing both eyelids. 6. What vein may, under certain circumstances, transmit the blood from the lower half of the body to the heart when the circulation is disturbed in the trunk of the inferior vena cava? What path does the blood take in such a case? 7. Give the surface outlines of the liver and tell what viscera are in relation with its inferior surface. 8. Give the surface outlines of the spleen and tell why its superior and posterior borders are not determinable by percussion.

9. Locate five serous sacks enveloping organs. 10. The Knee: Describe the topographical anatomy of the knee, mentioning its bony landmarks, tendons, synovial membrane and bursae.

TOAST-MASTER'S SALUTATION.*

BY W. B. SAWYER, M.D., RIVERSIDE, CAL.
Bear with me, friends, I'm human and
to err is mine.

Be yours forgiveness and the grace divine.

In youth my thoughts were tempered with poetic fire,

But now, approaching chloroform, I tune a humbler lyre.

But were the hour at hand when kindly friend

Would offer me the Lethal mask to gently end

My days, no higher fortune would I ask Than that some doctor should essay the task.

For who, like you, who find how hard it is to kill

And lay a man away with gentleness and skill.

How often have you drawn your knives in vain

To see your dearest friends come back to life again?

How many times have fondest hopes on ipecac and calomel

Been shattered and the nascent saint got well?

How often have you told some suffering "cus"

His time had come; to go and make no muss,

Have showed, in many ways, you understand him And yet he'd stay and Christian Science

land him?
You've physicked him and dieted him

until he's like a lath Yet finally he's shuffled off by some

damned Osteopath.

You've loaded him with Ites, Oses and Orrhoeas

And unloaded fingers, toes, appendices and ears.

You've lavaged and massaged him with vibratory cranks

And still he lives and walks about with thanks.
You've filled his system full of micro-

scopic terrapins
*Delivered at banquet of Southern California
Medical Society, held at Riverside, Cal., Dec.

And deluged him with phagocytes and indexed opsonins.

You've anti-ed him with toxins and shot him full of juice

From horse and cow and guinea-pig and everything that's loose;

You've sprayed him and X-rayed him and scraped his whole inside,

Yet still he "ducked" and later on committed suicide.

So when it comes to killing and for me it must be done

I'll go to some assassin who does the job for fun.

For should I get to Heaven's gate with a Dr. for my guide

Saint Peter never would believe that by his hand I'd died.

"For sure no doctor ever killed. Some dire mistake must be,"

He'd say, and pointing downward, sadly murmur "Twenty-three."

FLORENCE NIGHTINGALE'S BIRTHDAY.

A telegram from London dated December 28, 1907, says: The honor paid Miss Florence Nightingale, the veteran of nurses and the originator of field hospital work, by King Edward, who has invested her with the much-coveted Order of Merit, has once more brought the old lady of 87 years into prominence and has made many of her admirers realize that she is still alive.

Congratulations have poured in upon her by the thousand and she has been inundated with requests for her autograph. One of these requests, undoubtedly the coolest and most callous ever penned by an autograph fiend, is worth preserving as an example of English tact and consideration.

It is addressed from Cromwell road, one of the fashionable localities in the Kensington area, and runs as follows:

"Dear Miss Nightingale—I have just read in the papers of the honor bestowed on you by the King, and I hasten to congratulate. Until I read this morning's paper I had no idea that you were still alive, and I hope you will live for Lany years.

"I am glad you are still with us, be-

cause, on looking through my autograph album, I find I have not your name among my collection of celebrities, and if you will not oblige me the collection will not be complete.

"Please do not delay, because at your advanced age life is so uncertain. As you know, 'In the midst of life we are in death.' I enclose a stamped envelope.

"Thanking you in anticipation,

"HARRIET B. L." (Signed)

OUR PET.*

I wonder if you've heard the news, what's happened to my man,

For sure, IT'S fine and int'restin' according to his plan; He's been a kind of ailin' for a time

now somewhat long,

And it's me that's been a worrying till my nights were all too long.

Just phat the matter seemed to be, we none o' us could find,

For colds and coughs and sich plain ills are common to mankind,

We tried blowin' atomizers till our arms wid pain would ache,

For the mouth was sure the central point of ivry pain and ache.

But none o' us could strike it, till we

heard of this new fellow, Wid his talk about "opsonins" and of bugs rale fine and mellow,

There's one, it's new and juicy and the scientists lav claim

It's equal to a hat-full o' any other kind of game.

Do I know the name ye ask me, o' this monster wid sich fame,

Dade, I'm proud to say we're boardin' him and he's gettin' kind o' tame. "Micrococcus Catarrhalis," did you iver hear the like?

It's enough to make the dictionaries want to go upon a strike,

There's bugs and bastes in plenty, and work they never shirk,

Catarrhalis roval Micrococcus writes his name in full in "Burke." January 22, 1908. M. B. B.

^{*}Inspired and written through the diagnosis of the cause of a stubborn co yza with which one of our Los Angeles colleagues was af-flicted. Verses written by his wife,—Editor.

RATS AND FLEAS DISSEMINATORS PLAGUE INFECTION.

Editorial in Medical Record.

In a report to the Fourteenth International Congress of Hygiene Demography, Dr. J. A. Thompson, Chief of the Department of Public Health of New South Wales, set forth his views on this subject, basing them on a careful study of the plague epidemic in Sydney, among civilized people and under . circumstances in which particulars concerning the infection of the individuals attacked could be learned with accuracy. He found that the fundamental question as to the share taken by the sick in diffusing the infection remained unsolved. In the first epidemic of 303 cases, he had a complete history of 289 patients, 276 of whom occupied dwellings widely separated from each other; in 266 of the latter only a single case occurred, although the greater majority had lain at home three days before being reported. Ten houses harbored multiple cases, which he divided into several groups; in the first, the time of onset of the successive cases was almost simultaneous; in the second, twenty-two or more days elapsed after cleansing before a second patient was taken ill; in the third group, the time relations of the successive cases were such that communication from primary patients was possible. In the first two groups, exposure of both of the infected members of each household to the same conditions appears to have been the determining factor; the cases in the third group really also admit this explanation when we consider that in 266 households no secondary cases occurred. Two other observations which bear on the question of communication from the sick were made. Total want of connection between successive cases in the same house was most often established with certainty, and the interval between them was often much longer than the incubation period. All this evidence, according to Thompson, warrants the formulation of the general rule that the epidemic spread of plague occurs independently of communication of the infection from the sick and it spreads by means which are external to man. Plague pneumonia furnishes a conspicuous exception to the general rule, but this is now relatively uncommon.

The author found that associated cases and those in dwellings far distant from each other had a sole distinguishable bond, which consisted in their resort during the day to the same workplace. to which they did not return after the onset of illness. Consequently it then fell to be inquired in what the infectiousness of locality consisted. He noticed that a very short line of wharves at which the produce trade (grain, hay, chaff, potatoes, etc.) was carried on had always been the immediate source of the local infection, and all the subepidemics began either at produce stores or at stables to which the produce had been carried from the neighborhood. The infection would manifest itself in new areas which were separated by wide tracts of plague-free houses. By such observations attention was directed to some animal which was free to wander among the dwellings of man, but which had access to the interior of only some of them. From antiquity it had been observed that rats sometimes died in numbers in places where man died of plague. In 1894, the disease in the rat was found to be the same as in man, and the rat was found to be the only animal in which epizootic plague and which existed was close man. Thompson therefore tried to establish some closer association between plague rats and cases. During an epidemic of twelve cases in nine buildings, seven of which were in a central district and two far away, plague rats were found in each; in other houses plague rats were also found, but no cases. There three widely-separated districts

were, however, connected in the following wav: Materials which experience had shown to be specially dangerous in connection with the introduction of plague into clean places, namely, hay, chaff, grain, etc., were conveyed from one of the first-mentioned seven houses to the two at a distance. All this goes to prove that epidemic dissemination of the infection is effected by the rat, but it does not explain the communication from rat to man.

The facts that the handling of dead plague rats by man was rarely followed by infection, that it was often possible to exclude contact or even close neighborhood between rat and man infected with plague, that plague rats were found in forty dwellings, in only four of which plague in man was found, go to show that the disease is probably not directly communicated from rat to man. The most generally received opinion is that the infection is conveyed to man by inoculation, the uninjured skin being an efficient defence against infection. Infection by inhalation or by feeding is rare. In the majority of cases Thompson found buboes in the groin, and just as frequently in people wearing shoes as in unshod people, so that the infection could not be attributed to wounds of undefended feet. He found that people who were fully clothed, having only their arms, face and hands uncovered, were infected in the protected parts, as buboes in the groin were most frequent. moculation must have been effected by some agent which could penetrate both clothing and skin. The flea alone answered these requirements; moreover, within buildings fleas live in the dust between flooring boards, outside in the soil, and notoriously reach the legs first. He therefore concludes that the flea is the ordinary agent of infection, and it, as well as the rat, is indispensable to produce epidemics.

Thus the measures which must be followed to prevent or check plague should be directed against the rat and

the flea. Even though his experiences furnish no evidence which points to the transference of the infection from the sick to man, he advises isolation of the patient. Prevention of epidemic plague hes mainly in habitually maintaining a distance between rat and man, for measures directed against the flea can have scope only in special circumstances. The requiste separation between man and rat will be better secured by improving the construction of buildings than by attempts to exterminate the rat. Complete rat destruction is difficult, and as only a few rats are affected in a rat epidemic, the plague rats may not be caught at all, as a sick animal usually remains in its nest. The danger to man from plague is directly proportionate to the accessibility of the interior of buildings to rats, and as experience has shown the difficulty with which all rats are killed in a building, the rational method of defence lies in so improving the construction of buildings as greatly to impede the entrance of rats to them, and in so taking care of food that it shall not attract them. When plague rats have been found in a dwelling, the first thing to be done, according to Thompson, is to spray the floors freely with a 5 per cent. solution of carbolic acid. This is a very effectual method of driving away and killing fleas, and thus of avoiding the only risk connected with the cleansing of plague-infected houses.

Although nothing absolutely new regarding plague and its mode of dissemination is offered in this address, the contribution is nevertheless one of great value. It affords most positive evidence of the fact of a double epidemic, one of rats and the other of man, running parallel one to the other, the inter-and intracommunication being maintained through the agency of the flea, although this does not necessarily preclude direct infection from rat to rat, and from man to man. The author

implies that an epidemic of plague is entirely controllable, and this is doubtless the case in places such as Sydney or San Francisco, where the authority of the health officer can be exercised without fear of revolt; but the conditions in Calcutta and Bombay are very different, for the passive resistance or open hostility of the native population is something that must be reckoned with and that often ties the hands of the most efficient of sanitarians.

BARLOW MEDICAL LIBRARY NOTES.

Hours of Opening.—The Library is open every week day from 10 a.m. to 5 p.m.

REFERENCES.—The Librarian will furnish patrons of the Library with a list of books and articles in the Library upon any given subject. Requests for such material should be as specific as possible, and should state whether articles in English only are desired.

Loans.—Patrons may draw books from the Library for home use; and may have material sent to them upon their written order, by which full responsibility for books so delivered is assumed.

Books should be returned or renewed at the end of two weeks.

Physicians may obtain books from the Library of Surgeon-General's Office, U. S. A., through this Library by paying express charges both ways.

RECENT ACCESSIONS TO THE LIBRARY SHELVES:

Anders, H. S., Physical Diagnosis, 1907. Babcock, R. H., Diseases of the Heart, 1907.

Babcock, R. H., Diseases of the Lungs, 1907.

Bauman, Frederick, Gonorrhea, Its Diagnosis and Treatment, 1908.

Bosworth, F. H., Diseases of Nose and Throat, 1898. Blake & Reik, Operative Otology, etc., 1906.

Caille, Augustus, Differential Diagnosis, 1906.

Forchheimer, F., Prophylaxis and Treatment of Internal Diseases. 1907.

Keyes, E. L. & Keyes, E. L. Jr., Surgical Diseases of the Genito-Urinary Organs, 1906.

Harrington, T. F., History of Harvard Medical School, 3 v., 1905.

Holmes, O. W., Medical Essays, 1895. Modern Clinical Medicine, 3 v., 1906. Osler. Wm.. Practice of Medicine, Ed. 5, 1004.

Ott. Isaac, Text-book of Physiology, 1907. Piersol, G. H., ed., Human Anatomy, 1907.

Tigerstedt, R., Human Physiology. Wright, Jonathan, Diseases of the Nose, Throat and Ear, 1902.

The Library is glad to receive back numbers of journals, reprints, medical reports, transactions, etc. This scattered miscellaneous material, of no particular value on private shelves, may be of the greatest use when it is collected, classified, and stands conveniently accessible in the Library.

Physicians are earnestly requested to send anything they can spare in the way of medical literature to the Library.

OBSESSION-WHAT IS IT?

Lippincott's Magazine answers this question as follows:

This word may be defined as an insistent and compulsive thought, habit of mind, or tendency to action. The person so burdened is said to be obsessed.

Few children are quite free from obsession. Some must step on stones; others must walk on, or avoid, cracks; some must ascend the stairs with the right foot first; many must kick posts or touch objects a certain number of times. Some must count the windows, pictures, and figures on the wallpaper;

some must bite the nails or pull the eye-winkers.

Consider the nail-biter. It cannot be said that he toils not, but to what end? Merely to gratify an obsession. He nibbles a little here and a little there, he frowns, elevates his elbow, and inverts his finger to reach an otherwise inaccessible corner. Does he enjoy it? No, not exactly; but he would be miserable if he discontinued.

It is during childhood that we form most of the automatic habits which are to save time and thought in later life, and it is not surprising that some foolish habits creep in. As a rule, children drop these tendencies at need, just as they drop the roles assumed in play, though they are sometimes so absorbed as to cause inconvenience. An interesting instance was that of the boy who had to touch every one wearing anything red. On one occasion his whole family lost their train because of the prevalence of this color among those waiting in the station. The longer these tendencies are retained in adult life, the greater the danger of their becoming coercive; and so far as the well-established case is concerned, the obsessive act must be performed, though the business, social, and political world should come to a standstill.

A child who must kick posts is father to the man who cannot eat an egg which has been boiled either more or less than four minutes; who cannot work without absolute silence; who cannot sleep if steam pipes crackle; and who must straighten out all the tangles of his life, past, present and future, before he can close his eyes in slumber or take a vacation. The boy Carlyle, proud, shy, sensitive, and pugnacious, was father to the man who made war upon neighbors' poultry, and had a room, proof against sound, specially constructed for his literary labors.

THE NEGROES' SWAN SONG.

The creative power to transmit race, life and color is much stronger in the white than the black race. If a black man and a white woman become the parents of a child it will be half white, or equally divided in blood between its parents. This shows the white female to have as much transmitting power as the black male. But if a white man and a black woman produce a child it will be three-quarters white. The white man has greatly more race-transmitting power than the black woman. So, through amalgamation of the races, would fade the color to the white.

Still a more potent factor than this menaces the negro race in this country; the barrenness or sterility of the mulattoes. This condition appears in about the third or fourth generation, among many yellow people. Especially is there no productiveness present when two of them, the strain of three or four generations of amalgamation, unite. In many cases they remain childless through many years of seeming sexual vigor. Editor of such might show some limited procreative power united with a companion of pure white or black blood.

The last United States census shows the negroes not to be equalling the whites in the ratio of births, and, for a want of more vitality in the children the negroes succumb to the diseases of childhood in a greater proportion than the white children. In one county in Indiana, where there are several hundred negroes, it is reported that there has not been a birth in a year.

The loss of the creative power seems greatest to the negro when amalgamated with the Anglo-Saxon, and probably greater in this climate than it would be in the tropics. It surely seems to point to a settlement of the negro problem in the United States.

The objection to intermarrying with the brown races is less than with the negroes, and will scarcely hold back the young white man, always so susceptible to the languorous charms and yielding submission of the Oriental women. To many Anglo-Saxon men the women of our race are too self-possessed and opinionated for a loving companionship. These characteristics are more common in the American women than in her sisters in Europe, and conspicuous by their absence in the brown women of Asia.

The intellectual standard of the American women being so much higher than their Oriental competitors that throng our shores, will also count against them with not a few men of their own color. A man is largely a vain, conceited, selfish bigot in pants, and seldom falls in love with the same type though she does wear skirts.—Dr. R. E. Houser of Indianapolis, in Medical Brief.

SPECIAL HOSPITAL DIETS.

A committee of leading physicians connected with the Paris hospitals was appointed to study the question of hospital diets. Their reports were published in the *Bull. de la Soc. Med. des Hop.*, July 12, 1901, and July 4, 1902. After commenting on the drawbacks of the pre-existing diet schedules, the following eight were suggested:

- I. Normal diet, the ordinary mixed diet for patients who have no nutritional disorders or affections of vital organs. A patient with sciatica, incipient tabes or secondary syphilis can eat as in health. Breakfast; milk or bean or pea soup, or coffee with milk, about onethird of a quart (30 centiliters). Dinner; meat 100 gm., dried beans or peas 150 gm., or fresh, 130 gm., with one egg. Supper: soup 30 centiliters, meat 100 gm., or fish 160 gm., fresh beans or peas 160 gm., or potato 240 gm., or rice 20 centiliters, or soft pudding 120 gm. Small silces of bread as desired. Beverage: wine 30 centiliters, or milk, beer or cider, I liter.
 - 2. Convalescent diet, for patients re-

covering from acute infections, typhoid fever, pneumonia, etc., specialized by the prudence necessary in the progressive increase and choice of the articles of food. Breakfast: milk, or coffee with milk, or milk gruel or bouillon, 30 centiliters. Dinner: roast chicken or chop, soft mashed potato or puree of dried beans or peas, 15 centiliters. Supper: milk gruel or soup 30 centiliters, white fish 160 gm., or 2 eggs or brains, stewed fruits or rice cooked in milk. Beverage: milk, 1 liter, or wine, 20 centiliters.

- 3. Superalimentation diet, which is styled the best means at the command of the profession for the treatment of the tuberculous. The diet is the same as any of the above, plus 2 eggs or sardines in oil, or 100 or 150 gm. raw meat, ground fine, or cheese or butter. The raw meat can be taken in 200 gm. of warm bouillon. This latter item is a recent innovation.
- 4. Antidiabetic diet. Baked potatoes should be substituted for gluten bread, formerly recommended. The nature of the food is about the same for all diabetics, but the quantity to be allowed varies with the individual tolerance; consequently each diabetic patient must have his individual diet card.
- 5. Antidyspepsia diet. The main point is to have the food finely divided in case of dyspeptic stomach troubles and dilatation. Breakfast: milk soup 30 centiliters. Dinner: roast meat 100 gm., preferably chopped or ground fine, puree of vegetables 150 gm., or soft puddings 120 gm. Supper: the same, plus a milk or vegetable soup. Beverage: milk, 1.5 liters.
- 6. Milk-vegetable diet. No special diet is indicated so often as this, the committee declares, and none is so beneficent in its results. It must be regarded as an actual therapeutic triumph, and scarcely a day passes that patients with kidney disease, liver affections, arteriosclerosis, and many others do not benefit immeasurably by it. It comprises 2 liters milk, 4 eggs, 2 milk gruels. Two

of the eggs can be replaced by 16 centiliters of a puree of green peas or beans, or 15 centiliters of a puree of some starch food or soft pudding.

7. Exclusive milk diet. This may require from 2.5 to 4 or even 5 liters of milk a day. The milk is not only a food, but a medicine as well, and the best of all in many cases. As a rule, 3.5 liters will be sufficient for men, 3 liters for women, and 2 liters for older children.

8. Salt-free diet. This diet was suggested by the committee as a recent innovation. In the lastest communication on the subject, July 5, 1907, Widal remarks that the salt-free diet must vary with different conditions and degrees of heart and kidney disease and dropsy of other origins. The food should be cooked without any salt, and, if a certain amount of salt is allowed, it should be given to the patient separately with the meal. The amount of unsalted bread allowed should be specified for each patient by the physician. The normal No. I diet may be ordered, omitting the soup. The amount of meat may be reduced. or the amount of vegetables, rice or "pastes" increased. It might be well to order 50 or 100 gm. of butter, sugar, preserves or raw fruits in place of the omitted meat. On special demand of the physician in charge, various relishes may be allowed to render the food more appetizing, such as vinegar, lemon, onion or garlic. The milk-vegetable diet, No. 6, might be ordered, without salt, increasing the proportion of mashed vegetables if the amount of milk is reduced to I liter a day, or adding butter, sugar, preserves or raw fruits, with unsalted bread. The unsalted diet schedule is thus a very elastic one, and it should be varied and adapted to counteract the the insipid taste from the lack of salt. The normal diets for children are classified as follows:

For nurslings: I liter of milk.

After weaning: 1.5 liter of milk; 50 gm. of a gruel made with wheat, barely,

corn, rye, rice or tapioca or dried beans, peas or lentils; 25 gm. sugar; 1 egg:

For young children; milk, 0.5 liter; bread as desired. Breakfast: milk soup or chocolate, once or twice a week, 25 centiliters. Dinner: 2 eggs or 80 gm. of fish, poultry or roast meat; 80 gm. of puree of beans or peas or rice; 100 gm. of potato or fresh beans or peas; 50 gm. stewed fruits. Supper: soup, 25 centiliters; from 60 to 80 gm. of vegetables or creams and 50 gm. of stewed fruits or preserves.

For larger children: Bread as desired; 0.5 liter milk. Same as for younger children, except that the amounts of vegetables are increased by 20 gm. and Gruyere cheese is allowed at dinner and 2 eggs at supper or 80 gm. fish or 60 gm. meat.

For convalescents the diet is the same as after weaning or for young children plus 60 gm. of meat or poultry. For superalimentation the diet is the same as for young or older children, plus from 100 to 150 gm. of raw meat.

These special diets have been in use at the Cochin Hospital for four years, and have proved extremely satisfactory. The unsalted diet is, of course, a recent innovation, but the others have established their practical usefulness. The French term in the original communications, "alimentary pastes"—pates alimentaires—has been translated soft puddings.—Journal American Medical Association.

The Gilroy (California) private hospital, after five years of joy and vicissitude, has closed its doors.

The Journal A. M. A. says:

Bier's method of treating tuberculous joints and other inflammations by congestive hyperemia has the approval of the medical profession—to a considerable extent at least. The technique, as applied to such a joint as the knee, is as follows: A rubber band, or one made of elastic webbing, at least two and one-half inches wide, is applied around the leg above the lesion. The bandage should be tight enough to make the skin red, but

should not interrupt the arterial circulation. It should not cause pain. It should be worn an hour or two once or twice a day. If the skin becomes tender, the position of the bandage should be changed. Other bandages should be removed and discharging fistulas should be covered up. The limbs should not be immobilized. Considerable time is required for the cure, nine months or longer.

The Journal A. M. A. says editorially: During 1907 the deaths of 2,013 physicians in the United States and Canada were noted in The Journal, equivalent to an annual death rate per 1,000 of 16.1, based on an estimate of 125,000 practitioners. This death rate

does not differ materially from those of the previous five years, which were, respectively, 1906, 17.2; 1905, 16.36; 1904, 17.14; 1903, 13.73, and 1902, 14.74. The age at death varied from 21 to 97 years, the average being 58 years, 11 months and 18 days. The number of years of practice of the decedents varied from the first year of practice to the seventieth, with an average of 30 years, 4 months and 21 days. About 11 per cent. of those who died were members of the American Medical Association. Chief among the causes of deaths were heart disease, cerebral hemorrhage, pneumonia and violence, in the above order.

BOOK REVIEWS

SURGERY: ITS PRINCIPLES AND PRACTICE. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hrn F.R.C.S., Erg. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume II. Octavo of 920 pages, with 572 text-illustrations and 9 colored plates. Philadelphia and London: W. B. Saunders Company, 1907. Per volume: Cloth, \$7 net; Half Morocco, \$8 net. W. B. Saunders Company, Philadelphia and London.

Volume two of this masterpiece is a worthy successor to volume one which we reviewed in the Practitioner some months ago. It is the work of ten distinguished contributors and carries this monument of American Surgery from chapter twenty-two to chapter thirty-five inclusive, eight hundred and thirty-three pages of surgical literature that will be lasting and representative for many years, to come.

Nichol's excellent article, the opening chapter of the volume, on diseases of the bones, dismisses cysts of the bone in eight lines and considers them practically always secondary to other lesions, usually the result of degenerative and softening of bone sarcomata, or an echinococcuscysts. We had rather looked forward to a more full consideration of this interesting condition from this careful observer, particularly the cysts of the jaw, such cysts as the French writers think start from the "debris paradentaires epithsliaux," which may be demonstrated in the embryo as well as

the adult, certainly the ten cases of Becker and sixteen others in the literature were not sarcomatous, nor could a recent case of the reviewers come under the latter classification.

Fractures and dislocations have been given a total of two hundred and sixty three pages, the allottment of the space and the selections of the author have been very happily chosen. Those who have made themselves familiar with the two recent books of Eisendrath will turn to these articles with a feeling of safety and security and they will not be disappointed. There is but little to criticize and much to commend. Eisendrath agrees with the newer teaching that fractures of the neck of the femur and epiphyseal separations of the head of the bone are no longer to be considered to be extremely rare injuries in early life. Undoubtedly some of the cases that we have been considering as coxa vasa and are due to fractures of the neck of the femur in childhood.

The method of treating fractures of the shaft of the femur in children depicted on page 245, and known as Schede's method receives the endorsement that it merits, indeed in many, perhaps most children it is the only satisfactory way to treat this fracture. We are glad to know that Eisendrath still finds the fracture box of use in treating fractures of the tibia and fibula.

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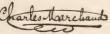
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THE MEATOX COMPANY. Laboratory: 20th Street and Neptune Avenue, Coney Island, New York. SOLD BY LEADING DRUGGISTS.

In isolated parts of this great western country on the large ranches it has proven of extreme value to the reviewer in cases of severe trauma, in which the isolated situation of the patient forbids the application of a plaster cast which could not be watched for several days. The text is not quite as clear as one would wish as to the position of the foot in the primary dressings in recent simple fractures of one or both bones of the leg, particularly in the variety known as Pott's fracture. This position however is made clear later on page 273 when speaking of the application of a plaster of paris bandage. Then the position of the foot is correctly advised to be at right angles to the leg and a little adducted. Carelessness in this respect may produce unfortunate results. A little more amplification of the sentence "old fractures (Pott's) with deformity are most satisfactorilly treated by osteotomy" would aid all but the most experienced operators.

The combination of Lovett and Nichols in clinical surgery and the pathology of the joints is a very strong one. Note is made of the increasing importance given to the general treatment in diseases of the joints. We in California have for many years recognized the great help that we obtained in keeping our patients constantly out of doors, day and night. Even in the rigorous climate of New England this plan is adopted to increase the resistence of the patients but just here one of the main objections is shown to encyclopaedic work in medicine in that this article contains no mention of bacterial vaccines, bacterines, and the value of opsonic index in tubercular disease. All the recent epoch work of Wassermann, Koch, Maragliano, Trudeau, Baldwin, Wright and Hammer find no mention here. Nor do we find mention of Calmettes opthalmo-tuberlin test in the difficult diagnosis. These omissions are inevitable in a work of this magnitude but they of

course in no way detract from the surgical value of the article.

The general practitioner or he who is young in surgery will find a lucid exposition of the more unusual conditions, as coxa vara and valga, Charcot's joint disease or tabetic arthropathy, spondilitis deformans, neuromimesis of the joints, often a diagnostic stumbling block, neurasthenic spine, articular neuvalgia and bleeders joints.

Lovett's article of one hundred and fifteen pages on orthopedic surgery bears the touch of the master hand throughout its preparation, it is a safe guide to the entire subject even to its minutest details, nothing has been overlooked. The chapter will be of guidance not only to the experienced orthopedic surgeon but to the younger man to whom the simple and more usual cases will come first, here he will find excellent guidance in pes planus, hammerzehe, valalgie, hallux valgus, hallux varus, Dupuytren's contraction and the like.

The bibliography accompanying this article is very satisfactory. Diseases of the lymphatic system are constantly attracting more and more attention and Gerrish's contribution brings the matter before us in a very attractive form. He is another writer who has joined the large and increasing class who deprecate the employment of eponyms in science, the distinguishing of a disease or anatomic structure by the name of a man is a very undesirable element in medical literature.

Fordyce in his carefully prepared and altogether acceptable article on the surgery of the skin and its appendages seems to have adopted the more unusual although correct spelling of our language, for example decad on page 647 and biopsy under figure 493 page 632, in recent years a number of New York writers have done the same thing, perhaps a characteristic of the great metropolis.

Spiller's experience is in accord with

our own in that traumatic subdural hemorrhage is much more frequent than epidural, and that subdural hemorrhage is often present as a result of injury where the skull is not fractured. I have a number of times seen this subdural hemorrhage come as a surprise to the operator. Spiller is correctly conservative in regard to the operative results of cerebral hemorrhage in the new born, we must wait many years before we will be able to judge of the late results of this newer procedure suggested years ago by Gowers, but first carried out by Cushing. His suggestion that many children with very defective brains will have a miserable existence prolonged by an early removal of pressure is worthy of mature consideration. He also calls attention to the fact, often overlooked, that serious injury to the spinal cord in the conus medullaris may be produced by lumbar puncture in children if the puncture is too high.

It is interesting to note that this writer thinks that regeneration of the spinal cord after injury to a sufficient degree to cause restoration of function is very improbable. The well known case of Stewart and Hare is considered unconvincing.

The whole subject, a most interesting one, of injuries and diseases of the nerves and the surgery of the spine is thoroughly presented by Woolsey of New York, including the more recent knowledge and technique of nerve anastomosis which has shown some brilliant results in the last few years. Woolsey unfortunately is obliged to agree with the rest of us in that the surgical treatment of neuralgia has not proven a very brilliant record for the art.

The article by Dercum on Traumatic neurasthenia, traumatic hysteria and traumatic insanity and that on surgery among the insane and the surgery of insanity by Da Costa are both just what we would expect from these two gifted Philadelphia authorities.

W. A. E.

A TEXT-BOOK OF CLINICAL ANATOMY: For Students and Practitioners. By Daniel N. Eisendrath, A.B., M.D., Clinical Professor of Anatomy in the Medical Department of the University of Illinois (College of Physicians and Surgeons), Chicago. Second Revised Edition. Octova of 535 pages, with 153 iffustrations, a number in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.00 net; Half Morocco, \$6.50 net. W. B. Saunders Company, Philadelphia and London. For sale by Fowler Brothers, Los Angeles.

This book is expected to serve as a bridge for both practitioner and student from the descriptive anatomy, as it is usually taught in the first two years of a medical course, to its daily application at the bedside, in the clinic, or in the operating room. From the first chapter on the "Examination of the Cranium in the Living Adult" to the last on the "Examination of the Spine of the Living Adult," the work is eminently practical. For example: "The color of the lips is a direct reflection of the condition of the circulation, except in those who have been exposed to the vicissitudes of the weather. When oxygenation is deficient, they are bluish or evanotic. Under normal conditions they are a bright red color. Their junction with the skin of the face is a frequent seat of epithelioma, especially in the lower lip."

The illustrations are excellent. Figure 15, showing cerebral localization, is an interesting example. As we glance through the book we see something strikingly practical on almost every page. "Resection of a rib is performed either (a) on account of necrosis, tumors or tuberculosis, or (b) to open the thoracic cavity for the relief of an empyema, or to drain a pulmonary abscess or a pericardial exudate. An incision is made parallel to a rib (to drain for empyema, the sixth in the axillary line is selected on account of attachment of diaphragm to the ninth here); In children the seventh rib in the posterior axillary line is chosen on the right side and the eighth on the left side."

OXFORD MEDICAL PUBLICATIONS. AUSCULTATION AND PERCUSSION. Together with the other methods of physical examination of the chest. By Samuel Gee, M.D., Fellow of the Royal College of Physicians, Honorary Physician to H. R. H. The Prince of Wales and Consulting Physician to Saint Bartholomew's Hospital. Fifth Edition, London. Henry Frowde, Oxford University Press. Flexible cloth, 325 pages. Hodder & Stoughton, Warwick Square, E. C., 1907.

This is one of the best manuals on this important subject that has come into our hands. The arrangement of the subject matter shows careful thought; and the definitions, explanations and interpretations of the various physical signs are scientific and exact. A book which should find a ready sale.

CLINICAL TREATISES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF DISORDERS OF RESPIRATION AND CIRCULATION. By Prof. Edmund von Neusser,
M.D., Professor of the Second Medical
Clinic, Vienna; Associate Editor Nothnagle's Practice of Medicine. Authorized
English Translation, by Andrew MacFarlane, M.D. Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College; Attending Physician to St.
Peter's and Child's Hospital and Albany
Hospital for Incurables. Part I. Dyspnoea
and Cyanosis. Cloth, 202 pages. New York,
E. B. Treat & Company, 1907.

In this monograph von Neusser discusses dyspnoea and cyanosis largely from the standpoint of their clinical manifestations, first in relation to disorders of respiration, and second, in connection with disorders of circulation. Under each of these major heads he makes many sub-groups, giving in his consideration of individual diseases a most excellent presentation of their important clinical manifestations.

OXFORD MEDICAL PUBLICATIONS, DISEASES OF THE NOSE. By Ernest B. Waggett, M.A., M.B., B.C., (Cantab.) Surgeon to the Throat and Ear Department of the Charing Cross Hospital; surgeon, London Throat Hospital, and Throat and Ear Department, Great Northern Central Hospital, London. Henry Frowde, Oxford University Press. Cloth, 282 pages. Hodder & Stoughton, Warwick Square, E. C., 1907.

A little book presenting familiar subject matter in new and entertaining

form. Yet withal, because of the good illustrations and the emphasis laid on practical aspect of the subject, an excellent manual for those who would make a quick review of the subject.

OXFORD MEDICAL PUBLICATIONS, DISEASES OF THE LARYNX. By Harold Barwell, M.B., Lond., F. R. C. S., Eng. Surgeon for Diseases of the Throat, St. George's Hospital; Laryngologist, Mount Vernon Hospital for Diseases of the Chest; Consulting Surgeon for Throat and Ear Diseases, Cripples' Home for Girls; Consulting Laryngologist, National Association for the Establishment and Maintenance of Sanatoria for Workers. London, Henry Frowde, Oxford University Press. Flexible cloth, 262 pages. Hadder & Stoughton, Warwick Square, E. C.

This is a practically written manual that should be of considerable value to those who would have a monograph on laryngeal diseases and treatment dealing with the subject from the therapeutical rather than from the pathological standpoint. Text and illustrations are both good.

A TEXT-BOOK OF PHYSIOLOGY: For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Second edition, thoroughly revised. Octavo volume of 939 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$4 net; half-morocco, \$5.50 net.

Howell's excellent Text-Book on Physiology is now so well known as to need no longer an explanation of its scope or worth.

In this book the entire domain of physiologic phenomena has been covered in most admirable manner. This second edition has enabled the author to introduce much new matter in a book that already had become noted as containing the best of what recent researches had brought forth.

A MANUAL OF THE PRACTICE OF MEDI-CINE. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Eighth edition, revised. 12mo of 558 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Flexible leather, \$2.50 net. A good book for those who wish to review; therefore of value to students, as well as to those who wish to have a compact volume for ready reference. Its worth is attested by the fact that this is the revised eighth edition.

MODERN SURGERY: GENERAL AND OP-ERATIVE. By J. Chalmers DaCosta, M.D., Professor of the Principles of Surgery and Clinical Surgery in the Jefferson Medical College, Philadelphia. Fifth Revised Edition, Enlarged and Reset. Octavo volume of 1283 pages, with 872 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.50 net; half morocco, \$7 net. For sale by Fowler Brothers.

This book has been revised, reprinted, recopyrighted and entirely reset sixteen times since October, 1894; that is more than once a year for the fourteen years of its existence.

Little more needs to be said to demonstrate its worth and popularity. Each edition has been altered or expanded, and considerable new matter has been added as the progress of the art of surgery has demanded. The following sections are brought sharply up to date: Hernia, ulcer and cancer of the stomach, ulcer of the duodenum, tetanus, snake bite, syphilis of bones and joints, gonorrhoea in children, concussion and compression of the brain, hydrocephalus, cephalocele, spina bifida, suture of the divided spinal cord, injuries by electricity, fractures of the bones of the foot, surgical tuberculosis, cleft palate, Bier's method of congestive hyperemia and perforation of the bowel in typhoid fever. The entire new matter added is very voluminous and includes: Fractures of the carpal scaphoid, dislocation of the semilunar bone, operation for united fractures of the femoral neck, operations of Hugier and of Murphy for ankylosis, the treatment of Whitelow by the plan of Mower White, operations for brachial birth palsy, operations for intra-cranial hemorrhage of the newborn, treatment of neuralgia by osmic acid, discussion of the pleura

in chronic empyema, Brophy's operation for cleft palate, artificial stimulations of phagocytosis, scopoamin-morphin anaesthesia, local anaesthesia by injection of stovain, operation for movable kidney, Monk's method of identifying different portions of the small intestines, radium, Meyer's operation for carcinoma of mammary glands, Young's method of perineal prostatectomy, the interilio-abdominal amputation, Mosetig's method of filling bone cavities, the Johns Hopkins operation for inguinal hernia, the Quenu-Mayo operation for rectal cancer, Moynihan's short loop method of gastro-jejunostomy, the no-loop method of gastrojejunostomy devised by Mayo brothers, appendicostomy, the transverse excision for exposure of the vermiform appendix, malignant disease of the appendix, typhoid cholecystitis, Matas's operation for anuerysm and the treatment of peritonitis by incision, drainage, the semierect position and continuous low pressure proctolysis. A list that shows how careful the editorial revision has been and that the book is a true new edition, in fact as well as name, one that the reader may consult with the certainty of finding what he seeks. Those who are familiar with this gifted surgeon well know that all that he does is well and thoroughly done.

As the future of medicine and to some extent that of surgery lies along the lines of biology we would have been pleased to note a more extended reference to opsonins in surgery, but as our knowledge is so recent, later editions will undoubtedly cover this ground, too, in the author's masterful manner.

Diseases and injuries of the abdomen have attracted a great deal of attention in the last ten years and the author has given us a large and exhaustive chapter of 194 pages in very attractive form.

The unfortunate word "peritonism"

is retained, in brackets to be sure, to designate post-operative shock, in a later edition we hope it will be removed as it is misleading and may mask a severe but correctable hemor-The author repeats his own method for the identification of the small intestine and of the large intestine, which was originally published in the Medical News in 1894 and during this interim we have found no better or surer method, with of course the addition of Monk's method, of locating what special portion of the small intestines we may have hold of. Da Costa aptly says that "of recent years exploratory operations have become extremely common, and many abdominal conditions would be unrecognized without such exploration, or would be recognized at so late a period as to be beyond the reach of surgery by the time the diagnosis was made." But he adds and we wish to commend the addition, that the surgeon should, however, not be too radical in employing exploratory operations, because he can explore with such comparative impunity, he is not released from the obligation to endeavor by every proper method to make a diagnosis before resorting to operation. Young and unskilled operators often prefer section in cases in which the diagnosis might have been made without this procedure; this is notably true in surgical diseases of the stomach.

Time has shown that the Trendelenburg position has hardly proved as dangerous as the author indicates and later editions no doubt will show revisions in this statement.

Recognizing the desirability of accurate apposition in closing an abdominal wound the author says that he has recently, and presumably with satisfaction, returned to the method of Dr. Joseph Price of Philadelphia, that is, a through and through suture of silkworm gut or silk. The latter material in our hands has always been most

satisfactory. The Connel suture is also commended, much to the reviewer's pleasure.

Beyea's operation for gastro-ptosis is mentioned, but we are glad to note that it receives no commendation.

The operation of epiplopexy is also considered, but it, too, receives no endorsement, a silence which is commendable.

The author's modification of the elder Senn's operation for movable kidney has not been very generally adopted in this western country, it undoubtedly has advantages, but a recognition of the fact that the space below the kidney is to be narrowed by sutures and thus prevent the kidney from hanging in the space "like a bucket in a well," will accomplish all that is necessary for additional support.

Space forbids further quotations from this very excellent book, without which no surgical library is complete.

WILLIAM A. EDWARDS.

DISEASES OF INFANCY AND CHILD-HOOD. Their Dietetic, Hygienic and Medical Treatment. A Text-book designed for Practitioners and Students in Medicine. By Louis Fischer, M.D., Visiting Physician to the Willard Parker and Riverside Hospitals of New York City; former Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital, etc., etc.; Fellow of the New York Academy of Medicine. With 303 Text Illustrations, several in colors, and twenty-seven full-page half-tone and color plates. 979 Royal octavo pages. Extra cloth, \$6.50 net; half-morocco, Sold only by subscription. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The author feels that clinical observations in Europe and a large service at the Riverside and Willard Parker Hospitals, New York, has given him an abundant opportunity for comparing various methods of treatment. His intimate acquaintance with the immediate needs of physicians has proven to him the value of photographic and color plates to express the true nature of disease. For this reason throughout the book clinical and pictorial illustrations



This Index Finger

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of cases have been used with great liberality. Great stress has been laid on diagnosis, symptoms and treatment, while pathology and bacteriology have been given ample consideration.

Infant feeding is carefully considered in a space of 161 pages. Fischer seems to have had better luck with the socalled galactagogues than the rest of us; personally they prove of little avail in our practice; although the importance of influencing the nursing mother is seen at once by learning that 90 per cent of poor mothers are able to nurse their babes and only 17 per cent of rich mothers are able to do their duty in this respect, and this inability seems largely to be a matter of inheritance. We can hardly agree that recurring menstruation is no contra-indication for a wet nurse, while it is true that some apparently perfectly healthy women menstruate regularly during their period of wet nursing, we have never seen the infant do well under these conditions. It is the quality of the milk rather than the quantity which determines the value of breast milk. In fact, Fischer himself states very clearly on page 84 the untoward effects of menstruation on the wet nurse when fat dropped from 2.50 per cent to .65 per cent and the proteids from 1.93 per cent to 1.12 per cent.

The pages dealing with breast milk, wet nursing and the disorders of both mother and child during this time are worthy of careful reading by the physician and careful study by the undergraduate.

The chapters (from one to eight inclusive) on cow's milk, home modified milk, upon which, after all, most of us must depend, laboratory feeding, and other substitute foods and proprietary foods, the *beté noir* of pediatrics, are all clear, concise and valuable.

A ready test for the impurity of milk, that seems to have been generally overlooked, is recognized by Fischer,-that is, an increase in the proportion of lactic acid generated in the milk. acidity should not be higher than 0.2 per cent. We agree that the danger of transmitting tuberculosis by milk is very slight, provided of course that proper inspection by competent veterinarian has been maintained-there is no excuse for overlooking tuberculosis of the udder. The cow's udder is subject to about as many diseases as the female breast. If one should dissect many cows he would be surprised at the number that present some disease or abnormality of the udder. From the constant butting of the calf while sucking or the crowding and pushing of a herd the udders are injured, and we find old cicatrices, clogged ducts, sometimes calcareous or fibrinous, benign and malignant infiltrations and tubercular deposits. Eruptive skin diseases of the glands and ducts are very common.

The author seems to place the fat content rather high for the second day after birth. We can rarely give as much as I per cent of this early, nor do we often get to 2 per cent at the end of the first week. Our preference is for a low fat and proteid during the early days or weeks of life, but of course these may be made too low unless care and intelligence is used, otherwise Biedért's "Fett Diarrhae" is very apt to arise and we are impaled on the other horn of this dilemma. We are glad to note that the author clearly states that no set rule can be given for bottle feeding all infants: each infant's desires must be studied, while the capacity of one at two months may be six ounces, another at the same age will be satisfied and do well on four ounces. This should be remembered by the young practitioner. It is pleasing to note that the author has included in the very excellent chapter on Diseases of the Stomach the condition known as gastroptosis; this is much more frequent in children than is generally supposed, we would, however, hesitate to resort to surgery for its relief at the early periods of life.

Gastric ulcer is also a not very infrequent disease in childhood. Fischer reports two cases age 13, but the literature contains many in much younger children.

As illustrating the care with which Fischer has done his work we note the inclusion of amoebic dysentery, which must be a rare disease on the Atlantic seaboard; we on the Pacific see a number of cases of dysentery in children due to the amoeba Coli, the amoeba dysenteriae of Councilman and Lafleur.

In speaking of constipation, Fischer announces the rule, upon which he lays great stress, that a child should never be allowed to retire at night without having had a movement of the bowels during the day—this rule should be an axiom in every nursery in the land, and also what a clear statement is this—clinical experience has proven that inflammatory conditions of the right iliac fossa originate in the vermiform appendis. The book abounds in such concise statements of facts without persiflage. The pages devoted to pseudo-appendicitis are of extreme value.

We are surprised to find that in a book of this sort the chapter on diseases of the kidney and bladder is devoid of mention of sarcoma of the kidney, and when we turn to the chapter on abnormal growths in children we have no better luck; indeed a chapter with this title and containing no mention of neoplastic growths in the kidneys, ureters, ovary or vagina of children seems to us a little anomalous.

The closing chapters of this book are

very valuable and make it almost encyclopaedic in its scope. We are surprised to see that in a book just short of a thousand pages the author has been able to make such a complete exposition of today's pediatric knowledge. One may unhesitatingly commend this book.

WILLIAM A. EDWARDS.

A TEXT-BOOK OF PRACTICAL GYNECOL-OGY. For Practitioners and Students. By D. Todd Gilliam, M.D., Emeritus Professor of Gynecology in Starling-Ohio Medical College, and Sometime Professor of Gynecology, Starling Medical College; Gynecologist to St. Anthony and St. Francis Hospitals; Consulting Gynecologist to Park View Sanitarium, Columbus, Ohio: Fellow of the American Association of Obstetricians and Gynecologists; Member of the American Medical Association, of the Ninth International Medical Congress, etc. Second, Revised Edition. Illustrated with 350 engravings, a colored frontispiece and 13 full-page half-tone plates. 642 Royal octavo pages. Extra cloth, \$4.50 net; half-morocco, gilt top, \$6 net. Sold only by subscription. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This book has undergone a careful revision and is much improved. If in removing illustrations the author had used his pencil a little more vigorously he would have added more value to his revision. What use is figure 300, page 486, a head mirror; or figure 55, a powder blower; and figure 51, a fountain syringe? A number of illustrations have been added that are valuable, still many more could with propriety be removed.

This book is perhaps best known as the production of the author of the operation of round ligament ventro-suspension of the uterus, or as it is often called, Gillam's operation, another unfortunate eponymic for a very successful procedure, one that has won its way on its own merits. The book is a safe guide to the student and practitioner and among the smaller works on gynaecology has no superior.

We are glad to see that the author considers that uterine dilators of the Goodell pattern are the safest; the endorsement of the Martin curette is also good. This sentence, too, is good—"it

is a question indeed if the curette used post-partum has not killed more than it has cured." In the line of the conservative tone of this very good book the following sentence occurs under electricity—"unfortunately, it has its limitations, and requires a most intimate knowledge of its properties and their relation to pathologic conditions to render its use beneficial or even safe," a truism, almost.

In the large number of pages devoted to the genito-urinary system and in its carefully prepared sections one is surprised to find no mention at all of a Grawitz kidney, although the statement is made that new growths of the kidney are not infrequent.

The addition of a regional index of symptoms is of doubtful value. It is a little too clear cut for the practitioner and is too dogmatic for the student.

W. A. E

GYNECOLOGY AND ABDOMINAL SUR-GERY. In two large octavos. Edited by Howard A. Kelly, M.D., Professor of Gynecologic Surgery at Johns Hopkins University; and Charles P. Noble, M.D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 851 pages, with 405 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company, 1907. Per volume: Cloth, \$8 net; half-morocco, \$9.50 net.

This work, under the editorship of the distinguished Kelly and the wellknown Noble, is presented with the object of becoming of special value to the general practitioner, the investigator and the surgeon. A careful reading will show that all of these objects have been well accomplished by the thirty contributors who have been judiciously chosen to write the various chapters. Indeed their names are a guarantee of the worth of the volume. Nothing more need be said about the illustrations than to mention Herman Becker and Max Brodel's names; one will then know what to expect and he will not be disappointed.

A very happy arrangement is the concentration of the entire subject of Medical Gynecology into one chapter, thus eliminating for the busy general practitioner the necessity of spending hours in seeking what he needs.

The general surgeon and the general practitioner will also find much aid and comfort in the pages devoted to certain obstetric and gynecologic-obstetric subjects which will supplement his knowledge without laborious re-reading.

The scientific basis of gynecology rests alone upon bacteriology and pathology and in no other book in our language, with which we are familiar, will be found such a complete monograph on this subject; it also makes the book noteworthy.

Another very happy feature of the volume is the omission of all elementary matters that may be found in any and every text-book; in this way space is saved for more important matters and the work is the first attempt to cover both fields of gynecology and abdominal surgery.

Hurdon's 131 pages with their beautiful illustrations make one of the best contributions to the pathology of the reproductive organs that have appeared in the English language.

Noble and Anspach have done the profession a distinct service in their chapter on Medical Gynecology, and if the general practitioner would read this carefully and follow its directions minutely the gynecologist would see less disastrous results and patients would come under his care in a less hopeless condition. The directions for the technic of an intra-uterine application if carried out as here suggested would save women from untold suffering and often the sacrifice of their entire pelvic organs.

In later editions the treatment of gonorrhoeal peritonitis, puerperal pelvic inflammatory diseases and puerperal pelvic peritonitis will no doubt show revision in accordance with our increased knowledge of the great value of the bacterins and opsonins, after our disappointments with the sera. A very valuable contribution for the practitioner and the young surgeon is that on the care of the patient after operation, when they have passed from the hands of the surgeon. Just here in our experience is the time in which lack of knowledge spells defeat to all our efforts.

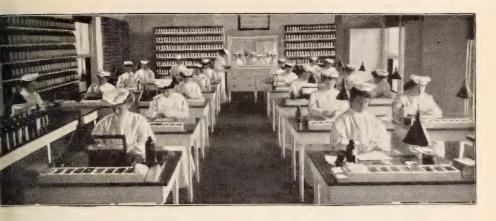
No surgeon should operate on the pelvic organs of women without warning them of the long post-operative convalescence and the need of sensible medical advice during that time.

The article on the treatment of young women having pelvic disease should be committed to memory by all who are commencing their career as gynecologists, also the chapter on the neuroses in their relation to gynecology.

Noble's chapter, plastic operations on the perineum, vagina and cervix: curettage of the uterus and inversion of the uterus is without a flaw, its text and illustrations are all apropos and shows no padding or unnecessary verbiage. Edebohl's four valuable pages on combined gynecologic operations could have been amplified with great propriety as latterly the trend has been all toward the desirability of completing our operative procedures at one and the same sitting.

Hunner in his article on diseases of the bladder and urethra calls attention to a second ridge in the bladder which he says is not mentioned by cystoscopists—it is produced by the vesico uterine sulcus outside of the bladder. On this account he very aptly calls it the vesico uterine fold. Like myself he has seen it confuse beginners in cystoscopy. It is situated about three centimeters back of and running parallel with the interuterie ridge, the structure that is the real guide to the ureters.

We are glad that Hunner agrees with us in that the detection of tubercle bacilli in the urine is not a very difficult



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Made under conditions of surgical cleanliness; every precaution is taken to insure an aseptic roduct. Furthermore, their contents are of proven physiological activity and accurate in rainage. These tablets are of the highest attainable solubility and absorbability and in mergencies the physician may rely on them to produce effects with the least possible delay. [Send for samples and pamphlet on Hypodermatic Medication.

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matter, notwithstonding the generally conceded opinion that it is a very diffimatter, notwithstanding the generally conceded opinion that it is a very difficult task. We must always, however, remember the intermittent character of tubercular bacterinuria. Kelly contributes the chapters on gynecologic tecnique, vesical fistulae, vaginal drainage for pelvic abscesses, conservative operations on the ovaries and tubes, a series of articles that are up to the standard of this distinguished contributor's work in gynecology. Kelly and Hurdon give us a chapter on gynecology in childhood that is the best that has yet been written.

Noble contributes chapters four, five, six, ten, eleven, twelve, thirteen, nineteen and twenty, a large proportion of the book, all made up of very carefully prepared sections in operative gynecology.

Radical abdominal hysterectomy for cancer of the uterus is presented by the originator of the procedure, John G. Clark. It is well and graphically written, beautifully illustrated and almost tempts one to perform this difficult and in our hands rather unsuccessful operation. A reading of this book makes one look forward to the subsequent volume with the desire of placing them both permanently in our library.

W. A. E.

Three or four drops of peroxide of hydrogen in the ear followed five minutes later by thorough syringing with boracic acid solution, will readily remove any impacted cerumen.—American Journal of Surgery.

THERAPEUTICAL HINTS

"A Missionary's Wife Helped By Sparteine" is the startling title of an article in the *Clinical Journal* (Abbott, Waugh, Faugh.)

A. W. F.

Dr. Arthur B. Smith of Springfield: Some time ago my attention was called to a preparation composed of a solution of heroin in glycerine, combined with expectorants, called Glyco-Heroin (Smith.) Each teaspoonful of this preparation contains one-sixteenth grain of heroin by accurate dosage. It is of agreeable flavor, therefore easy to administer to children, for whom the dose can be easily reduced with any liquid, or by actual measurement. It possesses many advantages not shown by any other preparation I have used. and has none of their disagreeable features.

For the want of a nail the shoe was lost, For the want of a shoe the horse was lost,

For the want of a horse the rider was lost,

For the want of a rider the kingdom was lost;

And all for the want of a horseshoe nail.

Doctor, can't you give me any hope?

No, dear Madame; while your husband is very old, yet his vitality is against him.

Lubricant for Catheters.—Dr. T. Geraty, Nottingham, England, writes as follows to the *Lancet*, London, October 27, 1907 (page 1028): "In reply to Dr. Dabbs, I find "K-Y" Lubricating Jelly a most excellent and elegant preparation; it is non-greasy, and its lubricating qualities are perfect. It is prepared by Van Horn & Sawtell."

The season is now on us in which we find many patients suffering from

coughs and colds. In many of these cases the general system is below par. and in order to hasten recovery from the catarrhal conditions of the air passages a general tonic is indicated. Cod liver oil is a century-old remedy for coughs, and where the stomach can handle it there exists no reason why it should not be employed, and in such cases the results are satisfactory. But in many of these sufferers digestion is enfeebled, the appetite is poor and cod liver oil is not well borne. Fortunately for patient and doctor, modern pharmacology has provided a preparation of this valuable agent which contains "all of the oil except the grease," to which has been added the hypophosphites, with glycerin and agreeable aromatics. It is not only wonderfully efficacious, but pleasant to the taste and readily handled by the weakest stom-We allude to the well-known Hagee's Cordial of the Extract of Cod Liver Oil Comp., prepared by Katharman Chemical Co., St. Louis, Mo.-The Carolina Medical Journal.

Dr. W. H. Porter, in the Post Graduate, October, 1907, says: "Until the profession as a whole grasps the extreme gravity and recognizes the frequency of indicanuria and learns how to interpret correctly its true import, there can be but little progress in its successful management." Appreciating the diagnostic and clinical importance of the presence of an undue proportion of indoxyl-potassium sulphate (indican) in the urine, and believing that anything that will be of practical assistance to the physician in the detection of same will be welcomed by the profession at large, the manufacturers of Chologestin have prepared a color scale, graphically illustrating the gradation of color produced in the urine in varying degrees of indicanuria, as the result of the appli-



CONTAGIOUS DISEASES of the STOMACH and INTESTINES.

In order to prove the efficiency of GLYCOZONE, I will \$1.00 bottle free to Physicians accompanying their request with 25c. to pay

forwarding charges.

A copy of the 18th edition of my book of 340 pages, on the "Rational Treatment of Diseases Characterized by the Presence of Pathogenic Germs," containing reprints of 210 unsolicited clinical reports, by leading contributors to Medical
Literature, will be mailed free of charge to Physicians

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Arts et Manufactures de Paris" (France) mentioning this Journal.

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cation of the most approved test, which is also fully described. A full and com plete interpretation of the reactions accompanies the chart, which is an accutate reproduction, in colors, of actual specimens. The scale is issued on heavy paper, in portfolio form, so that the physician may preserve same for reference. Write for same at once to F. H. Strong Company, 58 Warren street, New York.

TURPENTINE FOR THE HANDS.

Pure turpentine is a strong antiseptic and is extremely useful in many cases for cleaning the hands for operation, when one cannot use the permanganate of potassium and oxalic acid method (which ought to be employed when one has recently had the hands in pus and vet must operate). It is generally used improperly. The correct procedure is to scrub the hands with soft soap and warm water-running water if possible; if not, the bowl emptied and refilled at least twice-for at least five minutes; then to dry the hands thoroughly upon a clean (but not necessarily sterile) towel; and then to cut the finger nails "to the quick." The turpentine is then poured over the hands and rubbed in thoroughly around the roots and ends of the nails and between the fingers, two minutes at least being devoted to this. Finally the hands and finger nails are to be scrubbed in soap and clean warm water and then soaked two minutes (by the watch) in 65 per cent alcohol. They are then ready for immersion in the I to 2.000 sublimate solution.—American Journal of Clinical Medicine.

THE WEAK HEART.

G. Lambert, M. D. (*The Practitioner*) believes that in all weak hearts one or more of the following factors contribute to produce morbid effects:

I. Morbid conditions of the cardiac muscle cells—impaired functional activity, degeneration.

2. Deficiency in quality or quantity of the general blood-stream.

3. Degenerative changes in the arterial system, particularly in the aorta and coronary arteries (causing ischæmia of the myocardium).

4. Derangement of nervous control by the cardiac center and nerves.

It is obvious that, in some cases, all these factors may come into operation. but in most cases one factor is more potent than the others. An attempt to decide which factor predominates in any case involves many considerations—the age, previous history (especially as regards infectious febrile diseases). habits and mode of life of patient (with particular reference to alcohol, tobacco, lead, etc.), in addition to the physical signs revealed by careful examination of the heart and arteries.

He classifies the weak hearts most commonly met with under the following heads: I, the anæmic; 2, the nervous or neurotic; 3, the alcoholic; 4, the postfebrile; 5, the athletic; 6, the senile. He discusses these at length and in a most practical manner.—The Medical Review of Reviews.

The insertion through the sphincters at night, for a few minutes at a time, of a conical dilator (e.g., of hard rubber), of gradually increasing size, is often a valuable adjunct in the treatment of pruritus ani.—American Journal of Surgery.

A LACHMENTATION.

The ewe who had swallowed a drachm Of paris green said to her rachm,

I am going away,
But as long as you stay,
Please, dearest, be kind to our lachm.
--Southern Practitioner.

.\FTER THE MEDICAL COM-MENCEMENT.

Two newly-fledged physicians met the other day, and the following highly in teresting conversation ensued:

"Ah! Good morning, doctor."

"Good morning, doctor."

"And how are you today, doctor?"

"First rate; and how are you, doctor?"
"I'm all right. Got a good case of

meningitis at your hospital, doctor?"
"Yes; come down and take a look at
it. Anything special up your way, doctor?"

"Man fell from a scaffolding and broke his neck two days ago; still alive; may get over it. Pleased to have you call, doctor."

"Thank you, I will, doctor. Good day, doctor."

"Good day, doctor."—Doctors' Recreation Series.

SOUND ADVICE.

A physician, examining a student as to his progress, asked him, "Should a man fall into a well forty feet deep, and strike his head against one of the tools with which he had been digging, what would be your course, if called in as a surgeon?" The student replied: "I should advise them to let the man lie, and fill up the well."

FOR A YOUNG M.D.

"Yes," said the old doctor, "you should try to have your own carriage, by all means. Because when you want to get to a patient quickly—" "Oh," interrupted the young M. D., "I don't think any patient who sent for me would be likely to die before I reached him." "No; but he might recover before you got there."

HE KNEW THE LOCALITY.

Druggist (just opened)—I want to get these two plate-glass windows insured. What would it cost me?

Agent—Well, the rate would be \$2 a year for the window with a green light in it, and \$20 a week for the window with the orange light in it.

Antiphlogistine

Inflammation's Antidote



Pneumonia

Apply over the thoracic walls, front, sides and back, and cover with a cotton-lined cheesecloth jacket, as shown in the illustration.

Bronchitis

Apply over and beyond the sterno clavicular region. If a dressing is put on when symptoms of bronchial irritation first appear, a serious development may be prevented.

Pleurisy

Apply over and well beyond the boundaries of the inflammation.

In all cases Antiphlogistine must be applied at least ½ inch thick, as hot as the patient can bear comfortably and be covered with a plentiful supply of absorbent cotton and a bandage.

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A MUSTARD PLASTER.

Press me closer, all mine own,
Warms my heart for thee alone.
Ever responsive thrills,
Each caress my being fills;
Rest and peace in vain I crave,
In ecstacy I live, thy slave;
Dower'd with hope, with promise blest,
Thou dost reign upon my breast;
Closer still, for I am thine,
Burns my heart, for thou art mine;
Thou the message, I the wire,
I the furnace, thou the fire;
I the servant, thou the master—
Roaring, red-hot mustard plaster.

-Burdette.

CAUSE AND EFFECT.

Undertaker (to Harlem physician)—did a stranger call on you today for treatment?

Physician—No.

"That's strange. That gentleman was looking for a physician, and I recommended you very highly."

"Yes; I guess that's the reason he didn't come to see me."

AMENORRHEA.

The late Dr. Goodell, of Philadelphia. who was very popular with the medical students at the University of Pennsylvania 25 to 30 years ago, placed great reliance in the "mixture of the four chlorides" for women suffering from amenorrhea due to deprivation and depressing hygienic surrounding.

P. Hydrarg, chlor. corros I grain. Liq. arsenici chlorid. .48 min. Tinct. ferri chloridi. .4 drachms. Acidi hydrochlor. dil. .4 drachms. Syr. zingiberis, q. s. ad. 6 ounces.

M. Sig.: Dessertspoonful in water after meals.—The Med. Sum.

CONSTIPATION OF ATONIC SUBJECTS.

- R Tinct, aloes et myrrh...1 ounce. Chionia3 ounces.
- M. Sig.: One teaspoonful two or three times a day.—Ex.

ACUTE GASTRO-INTESTINAL CATARRH.

M. Sig.: One teaspoonful every two hours for a child of two years. Vary with the age and severity of the case.—

Med. Rec.

ECZEMA.

The following is used by Dr. O. Nobell in dry, scaly and itching eczema:

B Saturated solution of sodium hyposulphite 3 ounces. Saturated solution of carbolic acid10 drops. Oil of sassafras, a few drops.

M. Sig.: Apply locally two to four times a day.—Wis. Med. Recorder.

CHRONIC MALARIA.

R Tinct. iodine comp...2 drachms.
Liq. potass. arsen...2 drachms.
Seng3½ ounces.
Chionia4 ounces.

M. Sig.: Teaspoonful in a wine glass of water three times a day after meals.

— Burnett, New England Medical Monthly.

ACUTE RHEUMATIC PERICARD-ITIS.

B Potass. bromide 6 drachms.
Sodii salicylat 6 drachms.
Tinct. colch. rad. 1 drachm.
Tinct. aconit. 6 drops.
Aq. menth. pip. 6 ounces.

M. Sig.: Dessertspoonful every six hours.—The Prescription.

DANDRUFF.

- M. Sig.: Use once a day.—

DR. BRODNAX.



Vol. XXIII.

Los Angeles, March, 1908.

No. 3.

DR. WALTER LINDLEY, Editor.

DR. F. M. POTTENGER and DR. GEORGE H. KRESS, Assistant Editors.
DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW,
Associated Editors.

THE WORK OF THE CALIFORNIA STATE BOARD OF HEALTH.*

BY W. LE MOYNE WILLS, M.D., LOS ANGELES, CAL., PROFESSOR OF CLINICAL SURGERY, COLLEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA.

Four years ago when the present Board of Health took office there was nothing with which to begin work. No office room, no desk, no chair, not a scratch of a pen, nor a typewriter record, nothing but a position which was considered by every one as political, and no one having confidence in us, nothing was expected, nor did any one believe it possible for the State Board of Health to do anything. The laws were such that we could advise only. Our first work was to suppress plague, and get the confidence of the East, who were ready to quarantine against the State.

An epidemic of bubonic plague broke out in San Francisco in 1900, and continued for several years, but was fought with more or less success, though persistently denied by the San Francisco newspapers and our State officials, so that Gov. Pardee and the present board, which came into office in January, 1903, found itself confronted by a very alarming situation, and quarantine threatened against our

State. But by a change in policy and a united effort by all forces, viz., U. S. Public Health and Marine Hospital Officers, State and City of San Francisco Health Boards, working harmoniously and efficiently together, this dread disease was soon well in hand and controlled.

Our board sent its then president, Dr. Matthew Gardner, to Washington, D. C., in February, 1903, to make proper representations to the United States government, and later sent our very efficient secretary, Dr. N. K. Foster, to the meeting of State and Provincial Boards of Health at Washington, D. C., June 3, 1903, who was able to change suspicion into confidence.

At a meeting of the State and Provincial Boards of Health of North America, held in Washington, June 3, 1903, the question of quarantining California was to come up. At a meeting of the same society in February, there was a strong sentiment in favor of such a measure, but it was decided to wait and see what showing the new

^{*}Read before the Southern California Public Health Officers' Association at Riverside, Cal., December 3, 1907.

administration would make, and the question was laid over until June. At the June meeting, California was called upon first of all the States, and representatives of the Board took up the fight, and before night had a resolution of confidence in California passed, instead of a quarantine. By preventing a quarantine, millions were saved. The fight against plague continued until it was suppressed under the combined action of the local, State, and United States Marine Hospital Corps. Kinvoun was United States officer in charge when plague first broke out, and he was superseded by Dr. Rupert Blue, who remained until all cases of plague ceased to develop. There was an interval of about two years.

In September of this year, a new outbreak of plague began and Dr. Blue was recalled from the Atlantic coast and put in charge at San Francisco. Under the combined action of United States Government, State, and local authorities, this second outbreak has been effectively handled and new cases are becoming fewer each day. San Francisco Health Board is the best the city has had, having among its members several of our most noted medical men in the State. Dr. Blue has been given control and with his known ability in handling such a disease, all goes smoothly and well to the one end, extirpation.

In the south the State has coöperated with the United States Marine Health Officers, and by combining State and government authority, is protecting the cities and towns from seaboard infection. The "clean-up" in Los Angeles is a part of the whole preventive scheme, and was brought about by the good work of the Los Angeles County Medical Association and the coöperation of the State Board, and United States Health Officer at Los Angeles, Dr. Brooks, in insisting that the City Council should provide means and enable

the City Board of Health and its executive officer, to clean the city and so diminish the chances of an epidemic appearing in Los Angeles.

Now that we have a cleaner city than ever before, it is the duty of this body of medical men and our combined action, as other societies and boards, national, State, and local, to see that a better hygienic and sanitary condition is maintained in our largest southern city.

The following quotations are from letters lately received, the first from J. S. Fulton, of Maryland, the second from H. M. Bracken, of Minnesota, both very active in advocating quarantine four years ago, and shows the feeling toward us in the East:

"I think that the people in the East know what a tremendous task you have. in charge of the sanitary affairs of California. I think that I appreciate the great size of your State; and another thing that I am quite sure of, namely, that as long as you are running things in that State I have great confidence that whatever ought to be done, and can be done, will be done. I think that the State of California ought to be able to contrast its present situation in the presence of plague with its situation four years ago, and ought to congratulate itself that, however much trouble you may be having inside your political limits, you are not having any trouble on the outside." . From J. S. Fulton of Maryland,

"I think it would be an excellent plan for you to bring the subject of plague before the next Conference of State and Provincial Boards of Health in such a way as to arouse general interest, and I quite agree with you that the sooner the Eastern States awake to their responsibility the better it will be for all. I am pleased indeed to know how differently California is handling the plague problems as compared with the first cases reported." From Dr. H. M. Bracken of Minnesota.

Dr. Foster has given his whole time to the work, not having done one cent's worth of private practice since he took the office. He has been into all but six counties, some of them many times, on official business. He found a State, every city of which was drinking water which was greatly polluted by human sewage and cattle standing in the streams. There was no law to prevent. Now, through our efforts, it is possible to prevent this, and a strong sentiment has been worked up through our influence to have it stopped. Many town and State institutions have put in sewage destruction works at our request or threat to enjoin. We helped to fight through the Superior Court an injunction suit against Fresno for emptying her sewage onto a farm and not caring for it, and forced them to get reduction works.

We have protected the whole State and Pacific Coast against plague by compelling every vessel that does business on San Francisco Bay or its tributaries, to be fumigated every fourteen days. All cities have been visited and induced or forced to clean up.

We have organized a Bacteriological Laboratory, which has done excellent work for many parts of the State, and contemplate, as soon as appropriations are available, to have branch laboratories in different parts of the State. The Board took an active part in drawing and getting enacted the Pure Food Law, and the Drug Law, and have organized the department ready for work after January 1st, also Bureau of Vital Statistics.

VITAL STATISTICS.

The California law for the registration of vital statistics enacted in 1905 was put in operation quite generally throughout the State from July 1st of that year. In the last half of 1905 there were registered in the State altogether 10.652 living births; 12,385 deaths, inclusive of still-births; and

8338 marriages. For the whole calendar year 1906, when registration was more complete than in the preceding introductory period, the State totals were: Births 20,974, deaths 29,303, and marriages 21,317. The totals for the first nine months of 1907 are as follows: Births 17,937, deaths 22,355, and marriages 16.872.

The births have been tabulated to show for each registration district, that is, for every county and for every freeholders' charter city, the following statistical particulars for the calendar Total number—male, female; total white-male, female; negro, Indian, Chinese, Japanese; and white mothers-born in California, born in other States, foreign born, and nativity unknown.

The marriages have been tabulated to show for each county the following particulars each year: Total number; "number of marriage," that is, whether first of both parties, of groom only, of bride only, or second or over of both; number of both grooms and brides single, widowed and divorced; number of brides of each marital condition are white or non-Caucasian, and, for the whites, the number born in California, born in other States, foreign born and nativity unknown.

Detailed tabulations of deaths are made each calendar year only groups of counties, as follows:

NORTHERN CALIFORNIA.

Coast Counties-

Del Norte, Napa, Humboldt, Sonoma, Trinity. Lake, Mendocino,

Interior Counties-

Butte, Plumas, Colusa. Shasta. Glenn, Sierra. Lassen, Siskiyou, Modoc, Sutter, Nevada, Tehama, Placer. Yuba.

Central California.
San Francisco (City and County).

Other Bay Counties-

Alameda, Marin, Contra Costa, San Mateo.

Coast Counties-

Monterey, Santa Clara, San Benito, Santa Cruz.

San Luis Obispo,

Interior Counties-

Apline. Merced, Amador, Mono. Calaveras. Sacramento. El Dorado, San Joaquin, Fresno. Solano. Invo. Stanislaus, Kern. Tulare. Kings. Tuolumne, Madera, Yolo. Mariposa,

Southern California.

Los Angeles.

Other Counties-

Orange, San Diego, Riverside, Santa Barbara, San Bernardino, Ventura.

For each group the following statistical particulars are given: Total deaths—male, female; total white—male, female; negro, Indian, Chinese, Japanese; nativity of white descendents—born in California, born in other States, foreign born, and nativity unknown; and age classification of all descendents—under one year; one to four years, five to fourteen years, fifteen to sixty-four years, sixty-five years and over, and age unknown.

In addition to the statistical tabulations, card indexes are made for births. deaths and marriages, the last being in duplicate for indexing under the names of both grooms and brides. The birth index cards show the name of the child (if given) the names of the parents, and the place and date of birth. The death index card shows the name of the deceased and the place and date of death. The marriage cards show the names of the groom and bride and the place and date of marriage. All the cards, of course, carry index numbers referring definitely to the volume and page in that volume where the original certificate is to be found.

The vital statistics registration law of 1905 was an entirely new thing for California. Upon its passage the State Bureau of Vital Statistics was immediately organized with N. K Foster. M.D., Secretary of the State Board of Health, as an ex-officio Registrar, and George D. Leslie, formerly of the Federal Census Bureau at Washington, D. C., as Statistician. Birth, marriage and death certificates, of the standard style recommended by the Census authorities, were prepared and issued to local registrars throughout the State, together with circulars and pamphlets explaining the requirements of the law. The machinery of registration was thus started with comparatively little friction, though much letter-writing was necessary to explain matters fully to various local registrars.

The registration law was enforced so faithfully and as a result the registration of deaths was so satisfactorily complete that in 1906 the Director of the Federal Census accorded California the honor of rating it as a "registration State." This means that California was added to the few other States from which returns are accepted as being sufficiently complete for inclusion in the statistical tabulations of the Federal Census Bureau.

There were but eleven registration States in 1900, and only five were added in 1906. Besides California, the sixteen registration States now comprise Colorado, Connecticut, District of Columbia, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, South Dakota and Vermont. These include the populous New England and Middle Atlantic States, a few

of the most progressive Western States, and California alone on the Pacific Coast. California was thus honored by being listed with the leading States of the Union because our 1905 law for the registration of deaths is based on correct principles, as recommended by the Federal Census Bureau and the American Public Health Association, and also because local registration throughout California have cooperated with the State Registrar by enforcing the law in a reasonably satisfactory manner.

We have a well equipped office, emploving four clerks constantly. The Board has taken up the work against tuberculosis and secured an appropriation of \$2000 for the purpose of education. Literature is now being prepared, and lectures will be given throughout the State to educate the public. We have also begun the collection of a tuberculosis museum, which will be used as an educational feature at such places as lectures may be given.

At the last State Fair the Board had a series of stereopticon lectures given which were well received, and we propose another year to have them given under better conditions and in connection with the exhibition of such charts. maps, etc., as can be collected.

The fact that at the last meeting of the State and Provincial Boards of Health they elected me President for the ensuing year, and at the A. M. A. the section of Hygiene and Sanitary Science elected me its delegate shows the standing we have got in the East. These did not come on account of my personality, but because they feel that the California Board of Health is trying to do right, and want to recognize

The Board has a State Pathological and Bacteriological Laboratory in operation at Berkeley, and hopes if funds are allowed it, to establish substations at Los Angeles, Chico, and Sacramento and perhaps other points to make such

an institution of greatest use to practitioners in all parts of the State. At the December 3, 1907, State Health Officers' meeting steps were taken to make a State campaign for the appropriation of sufficient funds to enable the State Board to do this and many other things for its greater usefulness to public. Efforts to improve purity of drinking water and atmosphere and abate the smoke nuisance, by statutory amendments in last two legislatures, were defeated by the San Francisco gas lobby, cutting out the clause referring to smoke abatement. Greater authority should be given State Board of Health to enforce vaccination laws and compel school boards to fulfill their obligation and oaths of office, when they decline to keep out improperly vaccinated or unvaccinated children as is being done now in Long Beach.

If, as has been suggested, the State inspection of dairies were placed under the control of the State Board of Health, it would be enforced and all cities and towns would be better protected, and supply made pure and wholesome. No city can control its entire milk supply. If this Board had power and the money, the work would be cheerfully undertaken and enforced.

The excuse for such a long paper is the former figureheadism and inefficiency of former political boards, and the good work, only a beginning, which has been done during the past four years. If the work of the board is to be made more and more useful to the public, it must have the hearty cooperation of each medical practitioner and more and more good political missionary work done each year and show the would-be-legislators and office holders that the medical profession is a political unit to be reckoned with and that we propose to stand together behind the State and local boards of health and see that we get what we

know to be right and necessary for the public good, whether the dear public, at the time, appreciates our efforts or not. The "doctor in politics" for the good of State and public is a power, if

properly organized, and we can accomplish great things only by *consolidation* and *coöperation* of all medical men and medical associations.

Wilcox Building.

EXAMINATION OF THE EYE AS AN AID IN GENERAL DIAGNOSIS.*

BY DONALD J. FRICK, M.D., INSTRUCTOR IN MEDICINE, COLLEGE OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

In going over the literature for this paper it became apparent that practically all diseases either had eye symptoms that were constantly present, eye symptoms that were at times present, or had eye conditions as complications.

So that the examination of the eyes primarily, and the careful watch of the eyes during the course of any disease, is an absolute necessity. Any change from normal within or without the eye has its significance, and everyone of us should know what these changes mean.

The eyes are easy to examine without disturbing the patient. They should be looked at first to see whether there is any indication of change in the appendages, in the mucous membranes in the external coats, the iris, or pupils.

The eyelids:-Oedema here is significant of a great many conditions, and if present will lead us to ask questions of a particular kind-whether the man has been on a recent debauch, lost a great deal of sleep, the amount of urine he is passing, what, if any, drugs he has been taking, and whether the condition is a usual or abnormal condition. Heavy drinking, loss of sleep, kidney conditions, and large doses of such drugs as arsenic and the iodides cause this condition. Oedema may be present in anemia-so a blood count is always a necessity when this sign is present. Children present oedema of the eyelids after severe coughing in whooping cough, or in the beginning of the eruptive stage of measles. During the course of scarlet fever, oedema immediately makes us suspicious of a kidney complication.

Unilateral oedema is present in cerebral thrombosis, and also in angioneurotic oedema.

Local skin infections, as poison oak and erysipelas, cause this puffiness of eyelids, but as usually it is part of a general condition of the face; it is of hardly any interest.

The reverse or this condition, wasted eyelids—due to loss of fat—is seen in phthisis and other wasting diseases, most marked in acute dvsentery with rapid loss of water. Acute peritonitis and collapse from hemorrhage show this sign markedly.

Discoloration of the evelids:

Effusion of blood from contusions and violent coughing give the common black eve.

Yellow elevated patches are seen in xanthelasma.

Darkening of the lower lids may be a result of debility, loss of sleep, hunger, menstruation, or pregnancy.

The eyelids may contain tophi—giving us our diagnosis of gout. Styes suggest kidney diseases or diabetes, if frequent. The initial lesion, or tertiary lesions of syphilis, may be located here.

By depressing the lower lid we see the conjunctiva which gives us a fair idea as to the presence or absence of anemia. Phlyctenular conjunctivitis is

^{*}Read before the Los Angeles County Medical Association, June 3, 1907.

said to be an indication of a lowered vitality.

Lagophthalmus—unnatural open eye—may be due to contraction of scars, loss of power of the orbicularis palpebrarum, and facial paralysis. It is most typical in exophthalmic goitre, and with other eye signs give us a fairly accurate diagnosis at once. Incomplete closure in sick children is of a good deal of prognostic value, as it shows marked exhaustion. In hysteria this is a rather constant sign during attacks.

Ptosis due to paralysis of the levator palpebre may be caused by interference of function of third nerve, either from lesion along its course, at its nucleus, or in its cortical center. It suggests gummata, tabes, and tubercular meningitis.

Sclera:-

Jaundice first becomes apparent in the eyes, although bile pigments appear in the urine one or two days before. Unless under careful observation, however, this is not noted. Often your patient makes his own diagnosis in a case of catarrhal jaundice by this sign. Slight jaundice has to be differentiated from the masses of fat under the conjunctiva (pinguecula), this needs only careful observation.

Bluish or pearly sclerotics are seen typically in phthisis, and with the drooping, wasted eyelids give the beautiful pathetic eyes so common to this class of patients.

Due to the anemia attendant on nephritis we get a certain degree of pale sclerotics.

In Addison's disease by comparison with the bronzed skin, the whites of the eyes seem exceedingly clear.

Conjunctiva:—Injection and inflammatory conditions often give a needed clue to diagnosis.

Hay fever, measles, coryza, influenza, and neuralgia of fifth nerve all give an injected conjunctiva.

The examination of the discharges

from a purulent conjunctivitis often gives us our diagnosis of gonorrhea, or diphtheria.

The dose of such drugs as arsenic and the iodides may be controlled by watching the conjunctival injection.

Typhus and typhoid fever are said to be possible of differentiation by the constant presence of conjunctivitis in one eye in the former disease.

Subconjunctival hemorrhages may indicate fracture at base of skull anteriorly, blood passing into orbit.

This condition is common from violent coughing in whooping cough, and severe bronchitis. Severe straining while vomiting, at stool, or lifting heavy weights may cause rupture of small vessels. Increase of blood pressure during asthmatic attacks, epileptic seizures, or severe dyspnoea may cause this condition.

Increased lachrymation accompanies irritation or inflammation of the conjunctiva. Therefore present in most of the exanthemata.

The moist weeping eye of the chronic alcoholic is a diagnosis in itself.

Decrease of lachrymation accompanies collapse from any cause. In late stages of typhoid fever it is markedly present and calls for close attention to cleanliness of eyes.

Cornea -

That ill-defined grayish partial or complete ring around the edge of the cornea, arcus senilis, is of definite diagnostic value, showing by its presence in the old that degeneration changes have done their work, and in the young and middle-aged brings us to a consideration of the possible sclerotic changes going on within the body.

Ulceration of the cornea makes us look for a general cause, though this search may be fruitless. Lowered vitality after or during wasting diseases, syphilis, and rheumatism have all been given credit for these ulcers.

Iris-Pupil:-

Dilated pupils make us think, first, of possible use of mydriatics; second, conditions causing paralysis of third nerve; third, hysteria. This condition is found late in meningitis and hydrocephalus. Poisoning by strychnine, belladonna, stramonium, hyoscyamus, cocaine, and aconite is marked by dilated pupils. The fixed dilated pupils of too much chloroform, we are all familiar with.

Contracted pupils are found in the early stages of acute meningitis, during the course of tabes (may be exceedingly minute in this condition), and in poisoning from opium, jaborandi, and tobacco.

Immobility (bilateral) of the pupils is seen after use of mydriatics or myotics. Sachs says immobility of the pupil is very characteristic of syphilitic cerebro-spinal disease. When persistently present in hemiplegia it indicates specific endarteritis.

Loss of accommodation, with or without dilatation of the pupils following a sore throat, points to diphtheria, and makes us watch the other members of the family for symptoms.

The Argylle—Robertson pupil—loss of iris reflex for light, but not for distance, is typical of tabes dorsalis, but has been observed in progressive paralysis, cerebral syphilis, and very early in disseminated sclerosis.

Unilateral contraction or dilatation—This condition of the pupils is seen in aortic aneurysm, cataract, basilar tumors, fractures at base of skull, and in certain cases of pulmonary tuberculosis. In certain mental derangements unequal pupils are an exceedingly early symptom, sometimes preceding other symptoms by one or two years. General paresis often has this symptom early.

Fixation and irregularity of outline of one pupil may help us in a diagnosis of syphilis contracted in early life, with a specific iritis.

Exophthalmia is oftenest seen in Grave's disease, but may occur in other

conditions as thrombosis of the cavernous sinus due to venous stasis in the ophthalmic veins, and acute lymphatic leukemia where the bulging is due to the collection of lymphoid cells in the orbit. Herrick reports a case of this kind in a late journal. Rarely myxoedema presents slight exophthalmos.

Nystagmus is seen in disseminated sclerosis, multiple neuritis, progressive muscular atrophy, and meningitis.

The above are the most important conditions seen with the naked eye, and are of course more likely to be of service to most of us.

The following are conditions seen with the ophthalmoscope;

- I. Engorgement of retinal vessels—indicate increased general vascular tension or local congestion.
- 2. Pulsation of retinal vessels seen in aortic aneurysm, insufficiency of aortic valves, Grave's disease, and chlorosis.
 - 3. Optic neuritis:
- a. Papillitis—four-fifths due to cranial tumors, other causes lead poisoning, glycosuria, anemia, chlorosis, and meningitis.
- b. Retrobular neuritis. Tobacco amblyopia.
- c. Simple retinitis (neuroretinitis) in glycosuria, and granular, or contracted kidneys.
- 4. Retinal hemorrhages organic heart disease, arterio-sclerosis with contracted kidneys or granular kidneys, and malaria.
- 5. Choroidal tubercles in tubercular meningitis.
 - 6. Optic atrophy—

Primary in tabes and general 'paralvsis of insane.

Secondary—follows a neuritis.

7. Disseminated choroiditis with opacities of vitreous said to be pathognomonic of syphilis.

From the accumulation of eye symp-

toms given above we come to the following conclusions:

Eye symptoms may first suggest a diagnosis; second, give us our diagnosis direct, or, third, confirm a diagnosis already made. For example:

In the first class we may put oedema of evelids suggesting Bright's disease, subconjunctival hemorrhage in a child, whooping cough, or adherent iris-syphilis in the past.

Second, signs giving a diagnosis are: Argylle-Robertson pupil, tabes dorsalis, exophthalmos with Graefe's and Stellwag's signs, Grave's disease. Arcus senilis, arterio-sclerosis.

Third, the diagnosis in the following diseases may be confirmed by eye signs: Tubercular meningitis, choroidal tubercles, catarrhal jaundice by yellow sclerotics. Bright's disease by retinal hemorrhages.

In this paper have been given simply the common eye signs that are of definite use in general diagnosis-functional eye symptoms have not been touched, nor the relation of eye conditions to brain lesions, as that was most fully discussed at a late meeting.

THE NATURE AND VALUE OF THE AUSCULTED VOICE SOUNDS IN THE DIAGNOSIS OF DISEASES OF THE CHEST.*

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In all intra-thoracic diseases the information derived from a careful, systematic physical examination, is of prime importance.

There are few pathognomonic physical signs. Hence no method or means should be neglected, which will give us information of the process going on within. Nevertheless, I am convinced that the ausculted voice sounds are more frequently entirely neglected or hastily passed over as valueless or giving only supplementary data, than any other method of physical diagnosis.

That the ausculted voice sounds spoken and whispered, do give valuable physical signs, positive and negative, in many conditions of the lungs and pleural cavities, is beyond dispute.

As a means of diagnosis, they are deserving of greater development and more universal use, than has yet been accorded them.

Both the spoken and whispered voice sounds, are valuable, but not of equal degree in the same condition.

In the large majority of cases, the spoken voice sounds are entirely too loud and heavy. They produce on the ausculting ear, an indescribable jumble and roaring, which is practically valueless. The whispered voice, on the other hand, graduated in volume and intensity, by the will and instruction of the examiner, obviates those defects, and becomes at once the means of eliciting characteristic physical signs.

In order to fully comprehend the significance of the normal and abnormal sounds, coming from within the thorax, when a person makes articulate sounds, we must bear in mind several definite factors.

First—That the quality and audibility of those sounds have been transmitted through tissues of different density, and that they obey all the physical laws of acoustics.

Second—That the larynx, trachae and bronchi are more or less rigid hollow tubes, permitting the free ingress and egress of a column of air, which readily

^{*}Read before the Los Angeles County Medical Association, November 29, 1907.

transmits sounds; and that the more rigid chest walls, especially the sternum and ribs, act as a sounding board, while the vesicular portions of the lungs, with its numerous terminal subdivisions of the bronchial tubes and air besides, act as a muffler or insulator to those sounds. Thick chest walls, either of muscular or adipose tissue, or pathological deposits within the chest, have a similar effect, provided those deposits do not bind the lung to the chest wall; in which case the sounds may be more readily and better transmitted.

Thin chest walls, increased fibrous tissue of the lungs, and diminished vesicular tissue, aid the transmission of the sounds and render them more audible.

A third important factor to be borne in mind, is the individual quality of the tone and pitch of the voice sounds. These are characteristic for each patient and vary with sex and age. Clear consonating tones, moderately high in pitch, are better transmitted than are the gutteral and lower pitched sounds. The latter produce heavier vibrations and are more valuable for eliciting tactile or vocal fremitus, for which the clear high pitched tones are valueless.

The anatomical difference, on the two sides of the chest, of the division and relations of the primary bronchi and their branches, to the right and left lung, together with the anatomical arrangement of the liver, stomach and heart, are important.

In consequence of these anatomical conditions, the ausculted voice sounds are usually a little more distinct over the whole right chest, especially is this true at the upper anterior right side, where they are clearer and more audible than in corresponding location on the left side.

A somewhat similar condition and for similar reason, exists at the left inter-scapular region.

It is highly important to bear these

areas of normally increased audibility in mind, to avoid a too hasty conclusion and errors in diagnosis.

TECHNIC.

The method of eliciting the sounds is most important. The patient should be in a room with outside noises, especially talking, excluded; the chest bare or with only thin soft covering, sitting or laying down in relaxed comfortable position. The patient must be instructed how to speak or whisper to give the best To count slowly one-twothree; or repeat one-one-one, or other suitable word or phrase, and to repeat them as often as necessary in as near as possible the same tone and loudness. The whispered voice of the patient should not be louder, in beginning the examination, than is barely audible to the examiner's ear, at a distance of I1/2 to 2 feet, through the air, from the patient's mouth.

A little instruction to the patient, on the part of the examiner, will usually quickly secure the proper degree of loudness or intensity. The examiner should now apply the ear directly, or better to use the stethoscope, systematically to corresponding regions of the chest and carefully note the degree of audibility, the pitch and quality of the sound transmitted from within, ignoring that which may come through the air from the outside.

Should there come no sounds from within, then instruct the patient to whisper just a little louder till the sounds are heard.

With the stethoscope applied in the epesternal match or to the sides of the neck over the trachae, even the faintest attempt to whisper articulate words is usually heard as a moderately high pitched blowing sound without the articulate word distinguishable, a slightly louder whisper will distinguish the word; if still louder it becomes again indistinguishable by too great intensity and volume.

In the normal chest, with a modertely light whisper and the stethoscope applied near the sternum at second inerspace, the articulate word is but lightly audibile or simply a blowing ound, rather high in pitch.

This grows fainter and fainter the further the stethoscope is removed from over the larger bronchi, till over those cortions of the chest where pure vesicular breathing is normally heard it becomes entirely inaudible or the respirations seem as mere whiffs. The louder and more intense the whisper the further toward the periphery of the lungs the sound heard, but the whispered word is not distinguishable.

Hence we find, that with a light whisper, the rather high pitched sound or slightly audible articulate word is neard over those portions of the chest, both anterior and posterior, where normal bronchial breathing is heard and is seemed whispered broncophony, while ever those portions of the lungs where vesicular breathing is normally heard, the sound is so muffled that it is a mere interrupted whiff or it is entirely lost. This is known as whispered vocal resonance.

In the normal healthy chest the degree of audibility, the intensity, pitch and quality are uniform for symmetrical portions of the chest, depending upon the intensity of the whisper and the distance from the larynx; always excepting the slightly greater audibility of those regions due to the natural anatomical differences.

The whispered voice is principally an ct of expiration, hence the expiratory ound is the part most prominently rought out. It requires slightly deeper espirations than ordinary breathing with full deep inspiration, it therefore ften brings out qualities of sound and dventitious sounds not otherwise licited.

It requires but little effort in weak nd debilitated patients. It is easy to regulate by the instruction of the examiner, while, we all know, how difficult it often is to regulate the ordinary breathing of a patient under examination.

In all diseased or pathological conditions of the lungs, which make those organs more dense and better conductors of sound and eliminates the muffling quality of the vesicular portion, the voice sounds are transmitted better, are more intense and distinctly audible than normal.

This increased audibility is, in the main, proportionate to the degree of increased density of the lungs.

Of the modifications, due to abnormal or diseased conditions, the increased audibility may be slight, moderate or markedly increased vocal resonance. They may be diminished below the normal or absent.

The slighter degree of increased or exaggerated vocal resonance differs from the normal principally in intensity.

This occurs over small infiltrations or partial consolidations and is a most valuable physical sign, especially when associated with illy-defined bronchovesicular breathing. This increased whispered vocal resonance is specially delicate in the discovery of small tubercular consolidations.

It is present prior to bronchial respiration and increased tactile fremitus and at a time when alterations in percussion resonance are illy-defined or negative.

In moderately deep seated or small tubercular areas of consolidation the increased whispered voice may be the one positive physical sign obtainable.

When the whispered voice heard over the vesicular portions of the lungs is of about the same degree of intensity as that normally heard over the trachea and larger bronchi, it is called whispered broncophony. This indicates a greater degree of consolidation. It is associated with marked broncho-vesicular or bronchial breathing, increased tactile fremitus and dull percussion resonance.

Moderately increased whispered vocal resonance or whispered broncophony may be elicited also over retracted or compressed lung-as above a pleural effusion-over bronchial dilitations with thickened walls, in fibroid lungs, and in fact, in almost any condition causing compression of the lung-as tumors, foreign growths, enlarged glands and many other conditions. When the whispered voice is still further augmented in intensity and pitch and the articulate word or words become distinctly audible and seem as though whispered directly into the ausculting ear, are shrill, hissing, high in pitch; this is whispered pectoriloguy. It indicates firm, large consolidation, close to or in contact with the chest walls, or it may indicate moderate sized cavity with firm walls, rather deeply seated and with free communication with open bronchus. In all these conditions the whispered voice is much more delicate, and gives more characteristic physical signs than the spoken voice.

The articulate whispered words are sharp, high in pitch, concentrated.

They are associated with distinct bronchial or tubular breathing, absent vesicular element, increased tactile fremitus and marked percussion dullness. When there is added to pectoriloquy, alterations in the tone and quality of the sound of hollowness or echoing simulating the sound produced by blowing into the mouth of a rather large jug or barrel, with the pitch lowered, this is cavernous whispered pectoriloquy.

This indicates cavity with relaxed or collapsing walls and of considerable size. If the pitch is high and the tone and quality of the sound is ringing, metalic and hollow it is called amphoric pectoriloguy and indicates rather large sized cavity with firm solid walls communicating with open bronchus.

Cavernous and amphoric whispered pectoriloguy are the most characteristic

physical signs we have of a pulmonary cavity.

The one, with relaxed walls, large opening, low tension; the other with firm, rigid walls, high tension.

Typical amphoric whispered pectoriloquy is elicited in pneumothorax with open bronchus into the pleural cavity and is attended with the other physical signs of that condition.

For the eliciting of any of the above mentioned grades of increased voice sounds, a free, unobstructed open bronchial tube or tubes are essential.

Occluded, collapsed or compressed bronchial tubes from whatever cause mask or completely suppress the eliciting of these otherwise valuable and characteristic physical signs.

It is for this reason they are often absent in the latter part of the second or consolidation stage of pneumonia and almost constantly absent in the third stage of that disease.

The same conditions frequently exist in tuberculosis when the bronchial tubes are occluded by congestion, mucous, pus or other secretions.

Hence posture, cough, deep full respirations or whatever will open and clear the bronchial tubes and permit an unobstructed column of air through may enable us to elicit these signs. For this reason they may be entirely absent at one examination and present at a subsequent one, or the reverse.

A modified form of exaggerated vocal resonance is egophony, in which the transmitted sounds have a distinctive and peculiar nasal interrupted bleating quality.

It is found in several pathological conditions but is not characteristic for any one, though more frequently elicited at the upper border of a moderate sized pleural effusion, near the angle of the scopula posterior.

The voice sounds though present, and apparently increased above normal, in intensity, may seem faint or distant as if removed by some intervening media, from the ausculting ear. This is the nature of the sounds heard in simple compression of the lung due to a moderate pleural effusion, in recent unorganized plastic deposits, in cases of compression of the lung from enlarged bronchial glands, tumors, aneurisms, or from whatever cause the lung is compressed and the vesicular tissue of the organ diminished and at the same time separated from the chest wall.

On the other hand, if the compressed organ, though separated from the parietes, be firmly adherent to the parietal pleura, those sounds may be transmitted better and be more audible than normal. The sound then would be attended with increased tactile fremitus and an impaired or dull percussion resonance.

The spoken, but especially the whispered voice sounds, may be diminished below the normal or entirely absent.

This occurs in a variety of diverse affections. It may arise from conditions of the bronchial tubes, or from some state or condition of the perenchyma of the lungs. From affections of the pleura and pleural cavities or from conditions of the external parietes.

In cases of well marked increase in size or dilitation of the vesicular portions of the lungs, but without corresponding dilitation of the bronchial tubes, there is slight or marked diminution of the intensity of the voice sound.

even for loud whisper or moderate spoken voice. This is usual in marked emphysema.

The voice sounds are either distant and faint, greatly diminished or absent over large pleural effusions of all kinds, in pneumathorax without opening into a bronchus or when opening has existed and has closed or become temporarily plugged. They are diminished or absent over an atetectatic lung or portion of same.

In conditions of plugging, compression or occlusion of large or important bronchial tubes from whatever cause.

In all cases where the patient from disease or otherwise is unable to whisper or speak to produce the necessary sound waves.

Phlegophonia or artificial vocal resonance, is a method devised by Scherwald, to meet the above mentioned conditions, whereby it is possible to simulate the vocal sounds.

The procedure consists in gently tapping, with the finger or other plexor upon the larynx-thyroid cartelage or trachea of the patient with the mouth closed and noting the character and quality of the vibrations thereby set up, which obey all the laws for those of the normal voice. In persons constantly dumb, those with aphonia or who are unconscious, exhausted or too weak to have them speak for any cause, this method may be serviceable.

A RECENT EXPERIENCE WITH SMALL-POX.*

BY W. S. FOWLER, M.D., BAKERSFIELD, CAL.

About the first of June, 1907, a young man in Tehachapi, Kern County, a mountain of a few hundred people, broke out with what he called a mass of pimples on his face; there were a few on hands and feet, but the malaise from which he had suffered for a day

or two left him and except for a few muttered curses and the damned itching he was so little the worse for the disease that he went to work as usual, not considering it worth his while to consult a physician and when the haybaling crew, with whom he had en-

^{*}Read before the Southern California Medical Society, at Riverside, Cal., December 3, 1907.

gaged to work for the season, left town on June 12th he joined them.

About a week after his departure his sister had a sore throat, headache and high fever, but while she told her neighbors that "unless she felt better tomorrow she would see the doctor," the morrow brought so much relief that she did not consult a physician and continued her household duties, using some home-made ointment for the itching of the pimples she had, especially prominent on her forehead.

Early in July there were several cases of varicella seen and treated by a visiting physician, and we have no reason to doubt the correctness of the diagnosis for chicken-pox continued to break out throughout the following months of July, August, September and October, but the contagion of the two cases first mentioned was spreading and by October there were probably 150 cases of small-pox distributed over a section of fifty square miles.

The station agent of the Southern Pacific Railroad at Tehachapi was one of the typical cases; on October 5th he was kept from his work by what he thought to be a severe cold or possibly a repetition of the grippe from which he had suffered the year previous; he had a sore throat, headache, an aching of the back most pronounced about the loins and a high fever which kept him in the house two days, but he was so much better that he went to the station and performed his usual duties the fourth day and stood much goodnatured "joshing" over the eruption which covered his face and hands; the train crews especially made sport of his appearance and some who had seen the "real thing" told him that he had small-pox. The diagnosis had practically been made by the laity when my attention was called to the situation by the resident physician, being the county health officer of Kern County.

Much pressure was brought to bear

to keep the matter quiet, political, commercial and fraternal influence being invoked to prevent the report going abroad that there were any cases of small-pox in the community, but there were too many cases and the disease was too widely scattered and too firmly established to allow such a procedure and measures to cope with the epidemic were instituted.

A frame house of six rooms a short distance—about a mile—from the center of the town was rented and a pest-house established and those men who were without families were taken there, and as one of the patients was an efficient cook they were made very comfortable.

At first I was shown two cases said at that time to be the worst of the sick people, one having broken out five days previously, making this the eighth day of his sickness, and his eruption was typical chicken-pox, showing the drying vesicular stages, with two exceptions, two spots on his face were pustular: the other case was in the fourth day of the disease, a man who said he had had small-pox a year ago in San Francisco, having been in quarantine there four weeks, but being adults I considered it extremely doubtful that varicella ever appeared in this form. A few days later there could be no question as to this second case, it having become typical; but the first (Carmichael) showed dried vesicles only, although his 14-year-old boy and his wife had well-marked cases two weeks later there, some thirty houses in the town were placed under quarantine, all exposed persons were vaccinated and kept under observation and close watch kept for the outbreak of new cases or the discovery of new localities and of infection, close inspection of suspicious cases. We were soon rewarded by finding the spread of the epidemic under control.

The schools were closed and the people showed a hearty acquiescence and co-operation with the efforts of the authorities to stamp out the disease and within two weeks the new cases were reduced to less than one (average) a day.

It was late in November before the schools re-opened, but the business of the town had resumed its usual proportions before that time and while we expect to find an occasional case throughout the winter we do not anticipate any further trouble from the epidemic of the disease and congratulate ourselves upon the good fortune which attended us in controlling within such a limited time an epidemic which seemed to have existed for so long a time without recognition and was apparently so firmly established.

We regret that the neighboring counties should have been threatened from the disease originating within our lines, but are cognizant of but three cases coming to the notice of other communities which were traceable to Kern County and one of these reported by letter from Long Beach that he was "laid up there with chicken-pox;" two cases were reported from Los Angeles as having originated in Bakersfield, but as we were visited by a circus, which showed to over 5,000 people on Saturday, Sept. 21, during the height of the disease in the county and which was attended by many from the small pox district, we feel that we have been especially favored by fortune.

We could not avoid noting that vaccination seemed to be a perfect protection in this epidemic as not one individual who had ever been vaccinated was attacked by the disease. There was, too, a remarkable freedom of women and children from the number attacked, less than forty women and children in the whole number of two hundred and sixty cases recorded.

Among something like six hundred men working on the line of the Southern Pacific Railway within the zone exposed to infection there were but three cases of the disease, even men who had been sleeping in the same bunk-car as one of the cases escaped the disease.

There was but one death from smallpox and that a babe of but three months and but very little scarring resulted from facial eruption which tells plainly that the disease appeared in a very light form.

While there are a few isolated cases of small-pox in Kern County nearly every year and one or more are brought to our county seat from the mountains or the mines nearly every winter, Bakersfield and Kern City, adjoining cities with a population of over 11,000 people, escaped the epidemic with but nine cases although but sixty miles from the center of the infected district.

INTUMESCENT RHINITIS.*

BY F. W. MILLER, M. D., LOS ANGELES, CAL.

The fact, first, that intumescent rhinitis is fast becoming extremely common; second, that heretofore it has been relegated to a place of secondary importance as a symptom rather than a disease per se; and third, that its proper recognition, classification and cure is essential to the well-being and comfort

of a large percentage of our patients, is my justification for a paper upon this subject.

Intumescent rhinitis is a disease characterized by intermittent swelling of the Schneiderian mucus membrane, with more or less occlusion of the nasa!

^{*}Read before the Los Angeles County Medical Association.

The swelling may involve both cavities at once, but usually affects one side at a time, alternating in a few moments to the opposite side. This characteristic feature alone entitles it to consideration as a separate and distinct disease rather than as a more or less indefinite symptom of chronic rhinitis.

For the clearer understanding of this condition—its etiology and cure—a brief review of the histology and physiology of the nasal mucus membrane will be of value.

This particular membrane, aside from the usual features of mucus membrane in general, is possessed of a large amount of typical erectile tissue whose function is directed and controlled by constrictor and dilator nerve fibers distributed to the muscular coat of the vessel walls.

These vaso-motor nerves are a part of the great physiological controlling mechanism of the organism, and are so perfectly correlated in every part that their influence is manifest in practically all of the vital processes. By means of these vaso-motor nerves distant parts are influenced and affected and changes produced that are entirely independent of local conditions. The nasal mucus membrane, because of its peculiar construction, is particularly susceptible to all vaso-motor variations. So much so, in fact, that the nasal condition may be taken as a vaso-motor index of the general system.

Remembering the physiology of the nasal mucus membrane and its intimate association with the rest of the organism through the vaso-motor nerve fibers, it is easy to realize and understand that the causative factors of intumescent rhinitis are those which in any way influence or affect its vasomotor balance, causing a dilitation of the lacunar veins of the erectile tissue, either acute and transitory or producing a chronic distension due to a paretic state of the muscular walls. These fac-

tors are extremely numerous and various, including all perversions of secretion, elimination and metabolism, infections and nervous phenomena. The commonest factor by far, however, is to be found in faulty liver metabolism and the absorption of by-products of putrefaction and fermentation from the intestinal tract.

Infections, nervous phenomena, local conditions, etc., are not common, but must always be considered when searching for the cause.

The symptoms of this disease are more or less constant.

The patient is usually a good liver, fond of highly seasoned food and spices, of sedentary habits, more or less constipated, drinks little water, "bilious," etc.—the so-called lithæmic type.

He complains of an unusual susceptibility to colds—is sensitive to slight temperature changes and draughts.

His circulation is poor—often the slightest trifle will tip the balance and precipitate an attack—a step from sunshine to shade, smoke, certain odors, bright light, or even putting the hands into cold water.

He is usually a neurotic, imbalanced individual and hypersensitive to all forms of stimuli and irritation.

He complains of distressing periodic nasal obstruction, worse in the recumbent posture, usually of a transitory nature and accompanied by a variable secretion, which, if retained, decomposes and becomes offensive.

Various sensory neuroses are common-itchings, tickling, etc., with their usual accompanying paroxysms of sneezing.

The mouth breathing attendant upon the nasal obstruction produces the common array of vicious symptoms pressure, headache, pain referred to neighboring parts. etc.

Cerebration is poor. There is an indefinable heaviness or dullness, loss of memory, inability to concentrate, restless sleep; all the result of a venous congestion produced by the unnatural manner of breathing. Ordinarily the lungs drawing in air through the comparatively narrow orifices of a normal nose, creates a negative pressure in the chest which aspirates the blood into the large vessels of the lungs from the veins, thus normally preventing the congestion that otherwise occurs when there is no resistance offered to the inspired air.

There may be present sore throat and hoarseness, disturbance of the ears for lack of proper ventilation, perversion or absence of the sense of smell, severe pain, etc.—in fact, any or all of the clinical features of nasal obstruction.

The eye, being such a near neighbor to the nose, may present lachrymation, photophobia, etc., from a reflex cause or a distinct conjunctivitis and corneal ulcers from direct extension of any infective process up the lachrymal duct.

On examination of the nose during the interval we often find practically no evidence of the disease.

During the attack the mucus membrane of the turbinals and upper half of the septum is reddened, boggy, more or less completely blocking the nostril. A probe often reveals exquisitely sensitive areas whose slightest irritation is tollowed by severe pain and excessive sneezing.

The use of the probe differentiates between a transitory obstruction and a true permanent hyperplasia. The former is boggy, yielding and easily compressed—quickly returning to its previous condition. The latter is firm, resistant and impossible of compression. The extent of the swelling, however, can only be determined by the use of either cocaine or adrendlin, or both. This, together with the history, makes a mistaken diagnosis impossible. The only other conditions to be confounded are the extremely rare rhinitis cedematosa (serous infiltration), that punc-

ture relieves, and nasal palyp that no one ought to mistake.

Foreign obstruction, specific disease and misplaced septum are hardly to be confounded.

The prognosis of intumescent rhinitis depends entirely on the ability to remove the cause, or the destruction of the blood supply of the offending tissue. Occasionally a cure can be accomplished with ease, but, as a rule, vicious habits, heredity and perverted function are extremely stubborn and demand constant and long-continued treatment. These patients, to all appearances well, have a lowered resistance, and it is hard to convince them of the necessity of proper regulation.

These features affect the prognosis very materially and must always be reckoned with. Another feature that naturally affects the prognosis is the extent and duration of the disease.

Untreated, the tendency, if well established, is towards true tissue hyperplasia, which is permanent and unaffected by the removal of the cause and demands surgical relief.

The local treatment of this condition is often extremely necessary, but it should be relegated to a place secondary to general measures.

The great majority of cases of intumescent rhinitis will clear up and need no local treatment, if careful and intelligent search is made for the cause and it can be removed. Since it is an evidence of vaso-motor disturbance, the contributing factor must be eliminated, for local treatments can produce no decided permanent results unless carried to the point of destruction of tissue—a thing to be avoided.

Every cause of nerve exhaustion must be removed—fatigue, worry, overwork, etc.

Vascular tone must be established by changed and proper habits of life.

Syphilis, malaria, strumous tendencies and infections corrected by proper treatment and medication. The causative factors must all be considered and remedied.

The condition of the skin and emunctories must be restored to normal.

This brings us to the commonest cause of intumescent rhinitis, viz., intestinal toxemia.

The absorption of the by-products of intestinal putrefaction (proteid) is indicated by the presence of indican in the urine. This may, if persistent, be taken as a positive proof of intestinal disturbance—hence in these cases it is always necessary to examine the urine as the first step toward a cure.

Dr. Stucky, in an elaborate article along this line, has clearly established the fact that as long as there is indican present in the urine we cannot hope for any permanency in our cure of these cases, and suggests that the only proper way to stop putrefaction is by limiting the diet and removing the offending material in the simplest possible manner, viz., washing out the gut. High colonic flushings, followed by a large clyster of olive oil, will often produce miraculous results. It may seem a long cry from the colon to the nose, but the result justifies the means. After thoroughly cleansing the bowel its normal function must be restored and maintained. An occasional calomel and saline purge, followed by continued treatment directed towards increasing and encouraging peristalis, are the proper things.

Each case must be handled individually and the treatment varied accordingly.

A certain percentage of these cases, however, will need accessory local treatment for the relief of the distressing obstruction symptoms.

Any drug (cocaine, adrendlin, etc.) that temporarily contracts the swollen tissue is here condemned in the strongest terms.

These drugs impress the patient of your wonderful ability for about thirty minutes, only to be followed by an exaggerated return of all the symptoms.

Aside from keeping the nose free from secretion, drugs are of little value.

Local treatment to be of value must be directed to the destruction of the blood supply, and this can be most effectively done by use of the cautery.

Of the chemical caustics, the drawing of a head of chromic acid down a groove made by a knife is of service, but extremely hard to limit in its effect.

Generally speaking, the electro-cautery is the best adopted for this kind of work, for it can be better controlled and produces much more nearly a linear scar—a method most effective with minimum tissue destruction.

Long, narrow cauterizations are made at right angles to the blood supply, thus cutting off the circulation and limiting the possibility of turgescence. In cauterizing the inferior turbinal, a line is drawn extending from the posterior to the anterior end, well toward the base of the turbinal. For the middle turbinal and upper part of the septum, shorter oblique cauterizations are necessary and answer every purpose.

The work must be thorough, down to the bone, with as little surface destruction of tissue as possible, no more must be done than is absolutely necessary, for a nose lined with sole-leather scar-tissue is a poor makeshift.

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THE PROPER DIET IN ACID DYSPEPSIA.

BY BOARDMAN REED, M.D., LOS ANGELES, CAL.

A recent series of experiments carried out by Schloss with the help of a Pawlow fistula and reported in the Archiv für Verdaungs-Krankheiten

(Vol. XIII, No. 3) proves that a diet chiefly of meat or other proteid food is not so suitable in hyperchlorhydria as one consisting largely of carbohydrates and fats. A long-mooted question in dietetics has at last thus been practically settled. Since the fact was first discovered, that in one of the most frequent forms of dyspepsia-according to several authorities the most frequent-the trouble is due to an excessively strong gastric juice, the majority of writers have advised for such cases a predominantly proteid diet, especially the flesh foods. In hyperchlorhydria, the most common form of acid dyspepsia, if not the most common of all the indigestions, the excessive secretion of hydrochloric acid causes usually more or less discomfort and often an intolerable burning pain in the stomach one to three hours after meals, as well as an abnormal craving for hearty fooda kind of canine hunger-which meat best satisfies, because it combines with, and thus neutralizes, a larger percentage of the irritating surplus of free acid than any other form of ailment. Moreover, the starches are difficult to digest in this condition unless chewed uncommonly long and thoroughly to ensure perfect insalivation, since the starchconverting action of the saliva is quickly inhibited by the superacid gastric juice after the bolus enters the stomach, and indigestion then results. But some careful observers early began to note that, while such dyspeptics relished the meats and other proteids best and generally felt more comfortable after taking them, their hyperacid tendency was more persistent on that kind of a diet than when more of the fats and carbohydrates were eaten, preceded or followed by large doses of some efficient alkali. From time to time clinical tests have given support to the champions of lessened proteid feeding, showing that by these means cures are more rapidly effected. Experiments on animals reported by von Jaksch in 1890 and von Sohlern in 1891 and some of the more recent work of the celebrated Pawlow and his assistants, lent further confirmation to this view. In 1898 Jurgensen published an exhaustive review of the literature of the subject and his conclusion was that the then still prevailing preference of gastrologists for a chiefly proteid diet in conditions of hydrochloric-acid excess did not have a really sound basis.

Pawlow's elaborate experiments reported in his book, "The Work of the Digestive Glands," published in 1898, demonstrated that meat broths stimulate the secretion of the gastric juice more powerfully than anything else that can be put into the stomach and that meat and milk stimulate it much more than bread. Thus for some years past there has been much discussion of this subject and it finally resolved itself in the question whether it is better to choose the form of diet which most gratifies the palate and best palliates the disease or that which in connection with an appropriate line of medication promises the earliest cure.

The advocates of a meat diet have been inclined to question the evidence going to show its markedly greater stimulating character, but can scarely do so longer. The experiments of Schloss showed that the pure gastric juice collected from one compartment of the stomach of a dog prepared by the Pawlow method, contained a decidedly stronger percentage of hydrochloric acid, as well as a much larger aggregate amount of the juice, and that the secretion persisted for a longer time, when the animal was fed on meat than when it was given vegetables exclusive-Schloss made numerous experiments all of which agree as to these highly important findings. Various other interesting results were obtained at the same time. Such as figures showing the relative stimulating action of different kinds of vegetables and of meat when swallowed in large pieces compared with its excitant effect on secretion when ingested in a finely divided form. It was found that in the latter form meat causes considerably less secretion of hydrochloric acid than when bolted in chunks as dogs naturally eat it, and doubtless a smaller amount of gastric juice is required to digest it when thoroughly comminuted.

The results of these various experiments amply confirmed by experience, including that of some prominent authorities who at first held to the con-

trary, may be safely accepted now as conclusive. Nevertheless there will doubtless always be exceptional cases of hydrochloric acid excess in which the most digestible proteids may need to constitute the principal food for awhile on account of the accompanying fermentation of the carbohydrates which then becomes a troublesome complication.

DEPARTMENT OF SURGERY.

EDITED BY ANDREW STEWART LOBINGIER, A.B., M.D.

Lord Lister:

The Lancet for January 18 contains an interesting contribution from this distinguished scholar and veteran in surgery, on the sterilization of catgut. Aside from the useful formula which he presents for the sterilization of this suture material the vivid interest which the offering of this great man, now enfeebled by years and failing health, evinces in the progress of the science is an inspiration. Here is a man who has not only kept in touch with the progressive ideas of two generations of surgical thought, but whose alert and original mind conceived and promulgated the most vital doctrine in modern surgery, namely the influence of septic organisms in the process of repair. He has lived to witness the transformation, largely through his own great achievements, of the art of surgery so full of inaccuracies into a science of definite and well-nigh exact character. What more glorious retrospect in the evening of life than must come to this nobleman, so full of honors and renown. -

Cleft Palate:

Arbuthnot Lane, England's great plastic surgeon, discusses in the January 4th *Lancet* his latest technique in this defect. Those who remember his discussion in February, 1902, will find

some new suggestions in his treatment of this difficult problem.

Mr. Lane's work in palatal repair places him easily first in this field. Hence what he has to say is authoritative.

The general principles underlying the various operations which he performs for cleft palate is to close in the interval between the edges of the cleft by muco-periosteum in the case of hard palate, and by mucous membrane and submucous tissue in the case of the soft palate. Care is taken to avoid damage to muscles and nerves in the soft palate. Clefts in the lip are closed at the same time as the palate. This is done for three reasons: The first, and he considers most important, is that the soft parts which are removed from the margins of the lip may be of greatest service in the closure of the anterior part of the cleft. Second, he finds that postponing the hare-lip operation for a time reduces the chances of union. The third reason is that the sooner the pressure of the complete lip is brought to bear upon the segments of the upper jaw, as well as upon a displaced premaxilla, should it exist, the more rapid is the approximation of the bones forming the front of the cleft and the restoration of the premaxilla to its normal

relationship. The muco periosteum he regards also useful in closing the cleft.

He divides the flap formation which he employs to close the hard and soft palates into two methods: (1) If the soft parts over the edge of the cleft are thick and vascular a flap is cut from mucous membrane, submucous tissue and periosteum of one side, having its margin or base along the free margin of the cleft. Of course the palatine vessels are divided and the flap must depend on the vessels entering its attached margin for nourishment. The next step is to raise the mucous membrane, submucous tissue and periosteum of the opposite margin of the cleft with an elevator, after an incision is made along the edge for this purpose. reflected flap is now slided across the cleft and under the elevated soft parts of the opposite side, thus bringing the raw surfaces of each in apposition where they are held by a double row of interrupted sutures. What the reflected flap has lost in blood supply is thus compensated for by the normal vascularization of the superposed flap,

(2.) If, however, the cleft should be too wide to permit closure in this manner, "one flap, comprising all the mucous membrane, submucous tissue and periosteum on one side is raised except at the point of entry of the posterior palatine vessels, while the soft parts on the opposite side are raised in a flap from which the posterior palatine supply has been excluded and which turns on a base formed by the margin of the cleft. There is thus provided a mobile, well-vascularized flap which can be superimposed on the flap of the opposite side, the closure being necessarily rendered complete by flaps from the edges of the hare lip."

The author presents a number of figures illustrating the various modifications of the technique which a case under observation may demand, and the directness and simplicity for which Lane's teaching is celebrated, is conspicuously apparent in his explanatory comments.

Surgery of the Lungs:

Samuel Robinson contributes a valuable study to this subject in the February Annals. It is in the form of a preliminary report from the Division of Surgery in the Department of Physiology in Harvard Medical School and consists in a detail of experimental work on thirty animals. There were nine deaths and twenty recoveries.

The author agrees that success in thoracic surgery depends upon avoidance of lung collapse. The epoch-making work of Sauerbruch and Miculicz of Breslau and of Brauer of Heidelberg is regarded as establishing the principles upon which all subsequent work is founded. The infrequency of intrathoracic surgery in the large surgical clinics in this country and in Europe is evidence of the hazard which is recognized as existing under older methods of procedure.

The effect of lung collapse is a series of circulatory, nervous and respiratory disturbances which, if collapse is continued, result in death. Collapse must be avoided in two ways; either air must not be allowed to enter between the visceral and parietal layers of the pleural cavity, or else the lung must be kept artificially inflated. Adhesions accomplish the first condition. have been produced artificially, but they are not very practicable and their objections outweigh their advantages, so that this method from its limited application will probably give way to measures for the inflation of the lung. These are accomplished by establishing conditions of negative pressure applied to the outer surface of the lung, or of positive pressure applied to its aerating surface. Sauerbach advanced a number of objections to the use of positive inflation, as affecting the rythm, the circulation, the loss of heat, danger of infection, of causing emphysema, of persisting pneumothorax and difficulty of narsosis. He therefore invented the pneumatic cabinet or chamber to establish negative pressure. The advantages of this method are well known. A few months later Brauer, who with Petersen, had been experimenting with positive pressure in Heidelberg, published his article. He offered few objections to the pneumatic cabinet, except that of Brauer's disturbance of circulation. apparatus has the advantage of cheapness, simplicity, practicability and consists of a metallic box in which the head of the patient is placed, the neck surrounded by a rubber collar adjusted air-tight around the neck. Similar apertures at the sides admit the etherizer's hands. Ether is admitted to the helmet through a tube. There is a glass window through which the patient's face may be observed. Exhaled air is provided with an exit which meets the resistance of a water column.

With Brauer's principles in view Robinson has devised a stationary apparatus so arranged with compressed air, ether, oxygen and manometer attachments, as to enable the operator to anaesthetize the subject and at the same time to operate. For purposes of physiologic study the apparatus is admirable as Kymograph tracings of the circulation and respiration, together with manometer readings made during the operation, are shown to indicate the precise state of the subject during every minute of the operation. Slightly modified, it is equally applicable to the operations on man.

Since this is but a preliminary study of the possibilities of intra-thoracic surgery under positive pressure, the author is to be congratulated on having demonstrated the greater safety in these proceedings under carefully devised apparatus. The surgery of this field depends so entirely upon the mastery of respiratory equilibrium, that this report

of Robinson takes a high place in its practical solution.

Ventro-Suspension and Caesarian Section:

Prof. Peterson of Ann Arbor in the December, 1907, *Physician and Surgeon* reports two cases of ventro-suspension of the uterus done by himself, which later, on reaching term of pregnancy, required Caesarian section.

He dwells on the popularity of this operation "first advocated by Kelly as a cure for retro-displacement of the uterus." Chief among the reasons given for the popularity of this singular procedure, he mentions the ease of performance and applicability "to all cases of retro-displacement, whether the uterus is freely movable or held by adhesions." The author grants that "here and there a timid voice has been raised against the procedure on the ground that it was very apt to be followed by dystocia; but for a long time such objections were given little 'heed."

Peterson admits observing the warnings given in various reports in the literature in which were detailed these serious accidents of pregnancy, but frankly confesses "he was among those who neglected such warnings until brought face to face with the problem as presented by one of his own operative cases. "Then and then only," he exclaims, "did I realize to what dangers I was subjecting the exceptional patient. One such lesson was sufficient and since that time I have not performed ventro-suspension or fixation on a child-bearing woman." (Just why the author uses the word "exceptional," when this calamity, admittedly, may befall any case of ventro-suspension in the child-bearing period, is not clear.)

The writer does not spare even minutest details of these two, for him, epoch-making cases, which he was fortunate enough to carry safely through compulsory Caesarian section. The tragic features of these harrowing experiences are used to their full effect in the graphic lesson he impressively presents to his large audience of readers. One can heartily admire his courage and the conscience which brings this teacher to a realization of his responsibilities to the whole profession.

In reviewing contributions from others on this subject he quotes Andrews, who calls attention to the comparative frequency of asymmetry or torsion of the uterus following ventro-suspension of the uterus. Of the five cases in which it was noted, Caesarian section was required in three. A high position of the cervix is another abnormality, noted in both his cases and in 11% of Andrew's cases, and was at the promontory of the sacrum in 18 of the 21 cases of Caesarian section following ventro-suspension opcrations collected by Lynch. This is a cause of dystocia in a large number of cases. Again, the position and direction of the cervix makes version difficult and at times impossible.

"When the fundus is fixed and the upward development of the anterior wall is impaired there is a tumor-like mass formed by the hypertrophied anterior wall below the point of fixation. This mass may project over the brim of the pelvis and may even obstruct delivery. (In a case in which the reviewer was called by a colleague to do a Caesarian section an artificial Bandels ring had formed, together with a rotation of the uterus to the right on its long axis.) Williams, Noble, Martin, Clark and Bowley, Gilbert and Hurdon especially note this condition."

Malpositions of the foetus after ventro-suspension are quite common. Lynch noted 15 transverse positions in the 21 Caesarian sections.

Hurdon has collected 36 cases of Caesarian section performed for dystocia following ventro-suspension, in which the maternal mortality was 34% and the foetal mortality 44%. Some of this mortality is due to the efforts to deliver before the Caesarian operation is re-

sorted to. Sepsis is an imminent complication from the frequent examinations and the traumatisms arising from instrumental efforts to deliver.

Lynch believes that the best results can be obtained by resorting to section at the onset of labor without any attempt to deliver through natural passages. Peterson is in perfect accord with this doctrine and closes his manly discussion with these words: "Better than all methods of treatment is prophylaxis. The fact that one never can say definitely that a woman will be free from serious dystocia should she become pregnant after ventrofixation or ventro-suspension, is enough to concemn the operation in the eyes of the conscientious surgeon."

Fortunately, we have at the present time other equally efficacious and far safer operations for backward displacements of the uterus. Personally I find that shortening the round ligaments through a single incision answers every purpose. In my hands it has entirely superseded ventro-suspension."

ANTIVIVISECTION

A bill, which provides for the restriction of research by experiment on living animals, has been presented to the New York State Assembly. It does not, however, propose to abolish vivisection, but provides "that experiments on living animals shall be attempted only under the authority of the faculty of a college or university incorporated under New York laws or under authority of the State Commissioner of Health or a City Board of Health." The State Health Commissioner is to issue the license for such animal experimentation. The bill also provides that before and during the experiment the animal must be completely under an anesthetic, and if pain is likely to be felt when the effect of the anesthetic has passed away the animal is to be instantly killed. Such experimentation is not only for the advancement of general knowledge, but, humanely speaking, greatly useful for saving or prolonging life, or alleviating suffering.



Established in 1886 by
WALTER LINDLEY, M.D., LL.D., Editor and Publisher.
This journal endeavors to mirror the progress of the profession of California,
Arizona and New Mexico.

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Address all communications and manuscripts to
EDITOR SOUTHERN CALIFORNIA PRACTITIONER.

Subscription Price, per annum, \$1.00.

1414 South Hope Street, Los Angeles, California.

EDITORIAL

SHAKESPEARE IN MEDICINE AND SURGERY.*

Shakespeare, Ben Jonson and Moliere, the greatest dramatists in history, have each devoted much space to the physician.

Moliere treats the profession most malevolently and frequently hurls his shafts of sarcasm at the physician.

Ben Jonson pictures the typical quack -the same yesterday, today and, we fear, forever, but Shakespeare, "gentle Shakespeare," created physicians who were men of high character. His sonin-law, Dr. John Hall, was a prominent citizen and eminent physician, and from this intimate association the bard doubtless drew his idea of the medical profession.

This beautiful volume before us is

*The Medical and Surgical Knowledge of William Shakespeare by John W. Wain-wright, M.D., New York: Published by the author, 1907.

evidently a work of love by a devotee at the shrine of the great Elizabethan master.

Shakespeare as a Physician, by J. Portman Chesny, M.D., St. Louis; published by J. H. Chambers & Co., 1884; Medical Allusions in Shakespeare's Plays, by P. S. Donnellan, M.D., American Medicine, February 15, 1902, and The Physician and Surgeon in Shakespeare, by Arthur W. Meyer, M.D., instructor in anatomy at the Johns Hoskins University: Johns Hopkins Hospital Bulle-University; Johns Hopkins Hospital Bulletin, November, 1907, had already come from the pens of American physicians.

Dr. John Knott, an Englishman, in a recent number of the Westminster Review, says: "Shakespeare had an understanding of the principles of surgery and medicine nowhere behind the professional knowledge of the day, and when he differed from the current authorities it was in the direction of greater accuracy."

Only two hundred and fifty copies of Dr. Wainwright's work have been printed and we are the proud possessor of No. 59 of this "Author's Edition."

Dr. Wainwright says we may with certainty claim that Shakespeare had studied medicine. We must not go through this delightful volume making quotations, but cannot refrain from making a few.

Gonzalo: There were mountaineers dewlapped like bulls, whose throats had hanging at them wallets of flesh.—"Tempest," Act III, Scene 3.

This, as Dr. Wainwright says, is unmistakable reference to goiter and its prevalence in those who dwell in mountain regions.

Benvalio: Take thou some new infection to the eye,

And the rank poison of the old will die. "Romeo and Juliet," Act I. Scene 2.

Here is certainly a prophecy of the accine treatment of today.

'alstaff: Sirrah, you giant, what said the ctor to my water?

Page: He said, sir, the water itself sir, was a good healthy water; but for the party that owned it he might have more disease than he knew for.—Part Second, "King Henry Fourth," Act I, Scene 2.

The value of urinary analysis was known centuries before Shakespeare's time.

There are quotations from "Hamlet" and "Julius Caesar" showing a knowledge of the circulation of the blood. "Hamlet" was first printed in 1603 while Harvey made known his discovery of the circulation of the blood in 1628, although he states in his Exercitation—Anatomisa de Motu Cardis et Sanguinis, that he had for nine years been demonstrating the subject in his lectures at the College of Physicians in London. This would carry him back only to 1619, while Shakespeare died in 1616.

"Coriolanus," Act I, Scene I, gives also an excellent demonstration of Shakespeare's knowledge of the blood's circulation:

Menenius: I send it through the rivers of your blood, even to the court, the heart.

We must stop our browsing, but conclude by thanking Dr. Wainwright, on behalf of all lovers of the King of Poets for this addition to Shake-spearean literature.

DR. POTTENGER'S NEW BOOK ON TUBERCULOSIS.

Our colleague, Dr. F. M. Pottenger, Professor of Clinical Medicine, College of Medicine of the University of Southern California is the author of a new work on "The Diagnosis and Treatment of Pulmonary Tuberculosis," just off the press of William Wood & Company of New York. This book, to our mind, is of such merit as to be worthy of more than a passing notice.

We of Southern California who are brought face to face with tuberculosis every day of our lives are naturally interested in a work on this subject, especially when the author of such a book is personally well known to us. The widespread nature of the disease which he discusses should make this work of national interest because Dr. Pottenger has presented the great array of facts and observations which he has marshalled, in such wise as to make the volume a most desirable addition to the library of every medical man in the land.

The book is six and one-half by nine and one-half inches in size, and contains 377 pages, being bound in cloth. It contains one plate and forty-two cuts. Paper and print are good and clear and the typographical arrangement excellent, the different paragraphs having indented black-face headings so that reference work becomes not only easy, but a pleasure.

Distinguishing features of the text are the explanations of the reasons why conditions are thus and so, for the author not only tells what things are, but explains the causes. His style is easy and entertaining.

A preliminary survey of the volume shows that the author intended to lay stress on the diagnosis, not only of the late, but especially of the early stages of the disease, and also that his presentation of the treatment had constantly in view the relation of the different therapeutic measures to the production of the immunizing forces whereby the healing process is to be effected.

Chapter One considers the probable time of infection in tuberculosis, stress being laid on the liability of the symptoms first developing long after the first infection. The author also states his belief that tuberculosis infection is very common in childhood and further, that once infection has occurred, there is no telling when the process will become active. The chronicity of this infectious disease, which has its exciting cause in a specific micro-organism, is constantly emphasized.

The meaning of an early diagnosis, he asserts, is one made prior to the open bacillary stage and as the picture is very different then, than in the later stages, he discusses the symptoms and signs in separate chapters. The importance of taking a good clinical history is dwelt upon and explicit directions are given regarding the methods and objects to be sought in making the physical examination. The chapter discussing auscultation is especially good. In considering staining methods a descrip-

tion and drawings of Spengler's "splitter" or spores or sporoids is given and directions are given whereby they may not be destroyed in the making of sputum stains. Spengler's contention that tuberculosis owes its origin to both human and bovine bacilli is also taken up.

The tuberculin test is carefully considered, as would be expected from so staunch an advocate of tuberculin therapy as Dr. Pottenger. He states that "In the tuberculin test we have a supposed danger, in which much of the evidence is based upon unreliable observation, some of it upon the improper use of the remedy; but we also have a possibility of affording relief in nearly all instances and of establishing a cure in a very large majority of instances, when the diagnosis shall have been made."

In the discussion of this portion of his subject the instructions for giving the tuberculin test gain much in value, in that the directions are logical and complete. The tuberculin test as a proof of cure, the Pirquet method of giving the tuberculin test in infancy and childhood, and the Calmette-Wolf-Eisner opthalmo-tuberculin test are also considered.

The symptoms and signs of advanced pulmonary tuberculosis and of its complications, and the diagnosis of this stage are treated in the same careful manner as are the early stages, the author taking up his elastic tube percussion in the discussion of diagnostic methods.

One of the interesting chapters is that on the displacement of the thoracic viscera in advanced pulmonary tuberculosis, the presentation of the changes of position in the heart being particularly good, and containing much valuable information not to be found in the routine literature.

The subject of prognosis is handled in the comprehensive, yet clear-cut style that gives this book by Pottenger so much of its worth.

The consideration of the principles underlying the treatment of the disease gives us a therapeutic viewpoint that takes into full consideration the late researches on the opsonins and kindred work.

The chapters on open-air treatment, diet, rest and exercise, and hydrotherapy, contain not only that which is accepted by phthisio-therapists of today, but much that shows original thought on the part of the author. His diction in many instances is most apt and happy. Take, for instance, these three sentences from the excellent discussion of diet: "A rational diet in pulmonary tuberculosis is one which suits the particular patient in question. There can be no one diet for all cases any more than there can be one suit of clothes to fit all patients. . . . I am in the habit of telling my patients that I want them to eat the least amount of food that they can and gain weight satisfactorily." Here we have in a few words some of the skeleton structure upon which the most carefully planned dietaries are estimated. In the discussion of rest and exercise, he advocates Dettweiler's teachings that rest as a rule is more potent than exercise in the treatment of these patients.

On specific treatment, Dr. Pottenger

writes some forty pages giving to this much disputed field in tuberculosis therapy not only a scientific, but an interesting and clear presentation.

Hyperaemia as advocated by Professor Bier of Vienna comes in for a special chapter. His discussion of sanatorium treatment is followed by a consideration of climate, in which the author will give the advocates of high altitudes much to think about, although personally we believe Dr. Pottenger's contentions will be borne out by experience.

A discussion of complications, a special chapter on the treatment of symptoms and an appendix of more than fifty pages on special subjects complete this work.

In what we have thus far said, we have tried to give expression to our appreciation of what we believe is one of the best monographs on tuberculosis that has thus far appeared in the English language. We doubt not but that issue will be taken with the author on many points, but we believe also that but few of the measures advocated by him will be found, as time goes on, to be greatly in error.

We feel that Dr. Pottenger has brought great credit to the profession of Southern California in producing this book, and that its merit is such that it will receive complimentary recognition at home and abroad. We congratulate him on the publication of a treatise on a very important subject, that is compact, and yet broad in scope, scientific, interesting and clear.

G. H. K.

BRIGHT'S DISEASE CLIMATICALLY CONSIDERED

Comparatively little has been written recently in regard to the climatalogy of the Pacific Southwest. The pages of the Southern California Practitioner are open for-we might say are begging for-thoughtful, authoritative papers on the climatic therapeutics of Arizona. New Mexico, Nevada and California. Give us trief, concise articles on this line and enlighten the profession! We are led to speak on Climatology at this time by an instructive reprint of a lecture in the Medico-Chirurgical College of Philadelphia, by Dr. Guy Hinsdale of Hot Springs. Virginia, in the course of which he says: "Prolonged residence in high altitudes, particularly for woman, undoubtedly produces restlessness and, in nervous diseases, should generally be avoided. . .

"One of the diseases clearly amenable to climatic treatment is Bright's disease. The first requisite is that the air and soil shall be warm, sunny, reasonably dry and free fr m malaria or disagree able atmospheric changes. In a disease attended by extensive degenerative changes, such as nephritis, it is highly neursary to insure an abundant and undisturbed action of the skin. This is the secret, or perhaps we can now say the well-known advantage, of the climate of Southern California. It is pre-eminently a warm. - unny, agreeable climate. There are no sudden changes of weather. The little rain that falls never does anyone any harm. Out-of-door life is encouraged and is the rule the year round.

"In Arizona, especially during the

hotter season, it is not uncommon for persons to urinate only once or twice a day. The urine becomes concentrated and cystitis of a mild grade ensues and is followed by an increased desire to pass urine, though the quantity is small. The body weight is reduced in the arid regions. Dr. Thomas Darlington, who formerly practiced medicine in Arizona, ascertained that among fifty-eight persons of whom inquiry was made, only one had gained weight. Hence we see the improbability of persons with wasting diseases gaining weight in such a desiccating climate.

"The southern portion of Arizona, which has a much more moderate altitude than the northern portion, Southern California, or almost any part of the great interior valley of California are desirable localities for persons with Bright's disease.

"Our best course is to advise a warm climate first, one having moderate elevation and only a moderate rainfall. with small diurnal variations in temperature, the humidity being secondary in importance to temperature and wind. Young patients do not bear a cool climate so well as those in adult life. . . . It was Sterne. I believe, who said, 'God tempers the wind to the shorn lamb.' In climatic parlance, we may say we must temper the wind to the poor nephritic; we must shelter him, clothe him, support him with the proper food, guard him from the wintry blast, the storm, the snow, the cloud, and seek for him an abode of perpetual summer."

SELWYN EMMET GRAVES.

About midnight. Saturday, February 29, Selwyn Emmet Graves was killed by a freight train while crossing the Southern Pacific track in the manufacturing district of Los Angeles. He was the son of J. A. Graves, who is Vice-President of the Farmers' and Merchants' National Bank of Los Angeles, and one of the leading attorneys of California.

Selwyn had been spending the evening with an uncle and aunt in Los Angeles, and, alone in his automobile, was on his way to the family residence near Alhambra, eight miles out of town.

A watchman at this dark crossing saw the danger and shouted and swung his lantern, but to no purpose, as the young man seemed unable to check his machine—a crash and all was over.

He was 23 years old and was in the class of 1908 of the College of Medicine of the University of Southern California. He would have received his degree in June and had all arrangements completed for two years study abroad. He was an ideal young man, strong of intellect, generous by nature, democratic in spirit homerable to all things, and of commanding stature. He was full of scientific enthusiasm combined with love for his fellow man.

To relate one of many instances of his unobtrosive kindness. A few days before his death he was called from the College Dispensary to see a sick woman in a Maxican bovel. He spoke Spanish fluently, and the moaning mother, surrounded by hungry, crying children, told how the husband and

isther had been not of work severa. weeks until four days before, when he had sentred email iment with a fallfoat. and was killed the first day. The middw and the children were starving. Before the finished her story Selmyn was cryou too. He immediately went in his milihine to a near-to promision store end mas back in a few min tes outh a Meral strek. He was an excellent cook from many compling expeditions, and he s on had the skeet from stone had and the kettle steaming. This prime man when a good meal and stayed until mother and children bad eaten to their : 1 contern. This did not end his work. tor he raised a sum of money that will insere plenty for this family for many Cave.

We cannot, with our finite mind, understand why a life so much needed, so pregnant with usefulness should be statched from this unian world.

His classmates were the publicarers and they laid Selwyn to rest in a comtry clurch part, near the rid Son Gahrid Mission, surrounded by the energroun orange orchards, and overlocked
by the snaw-capped Sierra Madre Mountains. When we must part with those
whem we lime, may breamstances permit us to leave them in the quet of an
amosterations rotal demetery, as we
left all that was mortal of that dominable
specimen of young manhood—Selwyn E
Graves.

The Submissions Resection of the Nasal Septem is a reprint by Lee Madment Hord, its East asch Storet New York Cap. The author concludes "The submissions window resection has now been sufficiently tissed to place it to the firm foundation it deserves."

EDITORIAL NOTES

Dr. J. B. Northrup has been appointed county physician of San Diego County.

Dr. Prudence M. Welsh has located in Long Beach, Cal.

Dr. Lorena M. Breed has located in Santa Barbara, Cal.

Dr. G. H. Hall. graduate of Cooper Medical College, died in Randsburg, Cal., February 5.

Dr. Douglas Long of Detroit, Mich. has opened a sanatorium in La Jolla, San Diego county.

Dr. A. G. Rounseville of Williams, Ariz., has been spending a few days in Southern California.

Dr. Thomas P. Martin of Taos, New Mexico, is prominent in the work of Scottish Rite Masonry.

Dr. C. D. Ball of Santa Ana, County Physician of Orange county, has now a salary of \$1350 per annum.

Dr. Wellwood Murray of Palm Springs, Riverside county, has been very ill but is recovering.

Dr. D. C. Strong, formerly of Redlands, is now Superintendent of the County Hospital

Dr. F. S. Post of Syracuse, N. Y., has located in La Jolla, San Diego County.

Dr. A. Morrison has been awarded the contract as county physician of Pima County, with office in Tucson.

Charles Steele, "an East Indian doctor," was fined \$100 by a Los Angeles judge for practicing without a license.

"The Communal Life of Physicians— Its Cultivation and Value" is a reprint by Leartus Connor, A.B., M.D., Detroit.

Dr. F. M. Pottenger's book on "Tuberculosis" is now off the press and ready for distribution.

Dr. Aldo Crespi of Milan, Italy, has been spending a few weeks in Los Angeles. Dr. E. C. Moore, of Los Angeles, was recently thrown from his automobile by a broken axle, but escaped with a few bruises.

Dr. P. M. Monroe has been unanimously reappointed surgeon to the American Hospital in the City of Mexico.

Dr. W. J. Smiley, College of Medicine, University of Southern California, class of 1906, has located in Beaumont, Riverside county.

Dr. Thomas Lindley Thompson, a prominent practitioner of Irvington, Indiana, has been spending several weeks in Los Angeles.

Dr. S. Y. Van Meter, 101 East Avenue 57, Los Angeles, was recently elected a member of the Los Angeles County Medical Society.

Dr. C. A. Shepard of Needles was called hurriedly professionally to Los Angeles to see a patient in the California Hospital.

A few years ago butter was unknown to the Chinese; now the better class of Chinese are becoming large consumers of butter, all of it being imported.

Dr. R. D. Bradley of Peoria, Illinois, has been spending a few weeks in Southern California. He is especially in love with Imperial Valley.

Dr. Nicholas Senn left an estate valued at \$582,000. His sons, Dr. E. J. Senn and Dr. Wm. Senn, were named as executors.

In Massachusetts an applicant need not be a graduate of any medical school in order to be admitted to examination by the State Medical Board.

"One Thousand Personally Conducted Cases of Ethyl Chloride Narcosis," by Martin W. Ware, M.D., New York City, is an interesting reprint on an important subject. Drs. F. M. Pottenger, Norman Bridge and Geo. H. Kress addressed the Friday Morning Club of Los Angeles on February 7th. Their subject was Tuberculosis

Dr. Jessie Russell, formerly of Long Beach, has located in San Bernardino, and Dr. Ida B. Parker, formerly of Orange, Cal., has located in Tucson, Arizona.

Dr. Philip M. Savage of Chino and Dr. Nellie S. Hayes, Grant Building, Los Angeles, were recently elected members of the Los Angeles County Medical Society.

Dr. Norman Bridge, owing to press of other business, has resigned from the Esperanza Sanatorium, Altadena, California, where for several years he was chief medical consultant.

Dr. F. R. Burnham is President of the San Diego County Medical Society, Dr. Fred Baker Secretary and Dr. R. E. Austin Secretary-Treasurer. The Society has 55 members.

The Settlement—a Redlands institution for the care of indigent consumptives—held their annual meeting February 5th, and elected Dr. G. G. Moseley President.

The late E. C. Stedman, poet, critic and banker, by his will designated his cousin, Dr. Thomas L. Stedman, editor of the *Medical Record*, as his literary executor.

Dr. J. A. Smith, surgeon at the Soldiers' Home, Santa Monica, sustained a fracture of the left leg by being struck by an automobile at a street crossing in Los Angeles.

Dr. Leroy S. Peters and Miss Isabella Fyfe were united in marriage at the New Mexico Cottage Sanatorium north of Silver City, Saturday evening, February 8, by Dr. Francis Carroll, rector of the Episcopal Church.

Dr. John S. Miller, formerly of Peoria, Ill., has just paid \$22,000 for an orange grove in Redlands, Cal. Dr. Miller was born in 1845 and is a graduate of the Georgetown University College of Medicine.

In the early days of Yale College the students were not enrolled alphabetically but according to the rank of their fathers. One shoemaker's son secured a high position by saying his father was on the bench.

Dr. W. W. Beckett of Los Angeles has been appointed consulting surgeon of the Medical Department of the Santa Fe by Dr. N. H. Morrisson, chief surgeon. This covers all Santa Fe lines west of Albuquerque.

The purest pleasures I have ever known are those accessible to you all; it is in the calm intercourse with intelligent minds, and in the communion with the departed great, through books, by our own firesides.—Richard Cobden.

In ordering a diet the physician should remember the great variation in the size of eggs. A single egg should weigh not less than 15-6 ounces; one dozen eggs should weigh at least 22 ounces.

Swift's saying, "the best doctors in the world are Dr. Diet, Dr. Quiet, and Dr. Merryman," can be found in Regimen Sanitatis Salernitanum, which book was published about one hundred years before Swift's time.

Dr. W. A. Greene is county physician of Cochise County, with his office in Douglas. He was recently called to Bisbee—28 miles away—where he quarantined a family in which there was a mild case of small-pox.

Dr. Geo. E. Robison, of Provo, Utah, has been taking a vacation in Los Angeles. Dr. Robison is chief surgeon of the Provo General Hospital and surgeon to the Salt Lake Road. He is president of the Utah County Medical Society.

Dr. J. N. Baylis of San Bernandino recently had the ride of his life and it

came near being the last one. The horse ran away, broke the bits and ended his wild career by running against a telegraph pole and breaking his neck. The Doctor escaped unhurt.

The Fourth Mexican Medical Congress will be held in the City of Mexico in 1910. The meeting of this Congress will be synchronous with the centennial celebration of Mexican Independence which will add greatly to the interest of the occasion.

Dr. Albert H. Winter, College of Medicine of the University of Southern California, class of 1906, has returned to Los Angeles after spending a year in New York. He has offices in the Collins Building, 313 West Third St., with Dr. C. W. Pierce.

American Medicine, after many vicissitudes, has finally landed at 84 William St., New York City, with Dr. Frank C. Lewis as editor. Dr. Lewis is a graduate of the College of Medicine of the University of Vermont, class of 1902. American Medicine has several stockholders in Los Angeles.

The Journal of the A. M. A., Feb. 15, 1908, says: "While some of the early reports of cases treated by Trypsin were extremely favorable, later ones indicate that no permanent results are to be expected. Some physicians have observed such untoward results as to justify caution in this form of treatment."

Dr. Preston S. Kellogg, recently of Long Beach, Cal., has gone to the Philippines where he will serve for two years as civilian surgeon for the United States government. He has already served for seven and a half years in that capacity. He is a son of J. H. Kellogg of Battle Creek, Mich.

In Valencia, Spain, the price of wine recently fell to 6 cents per gallon and the wine-growers rolled their casks on to the public highways that passers-by might drink free of charge. Fruit-growers in Spain have been forced to

sell their Valencia oranges as low as ten cents per 25 lbs.

Holger Drachmann, the Danish poet, novelist and dramatist, died January 20, age 61. He was the son of a well-known physician of Copenhagen. His lyrics and national songs are known literally to every fisherman, farmer and villager in Denmark. He has been called the Robert Burns of Scandinavia.

The Tarrant County Medical Society of Fort Worth, Texas, is one of the most active organizations in the great Southwest. Dr. H. L. Warwick, the Secretary, edits a monthly bulletin which is full of good things. Dr. Warwick graduated from the Medical College of the University of Georgia in the class of 1900.

Telegraphic Correspondence. Manager Hospital Battle Creek:

Are you prepared to give Hot Air Treatment for rheumatism?

TIMOTHY DINGBATS.

To Timothy Dingbats:

Yes, and for every other disease known or unknown.

BATTLE CREEK.

Archives of Diagnosis, a Quarterly Journal Devoted to the Study and the Progress of Diagnosis and Prognosis, Vol. I, No. I, January, 1908, Edited by Heinrich Stern, Published by Archives of Diagnosis, 250 West 73rd St., New York City, \$1 per annum. This Quarterly is a valuable addition to medical literature.

Dr. George H. Kress is in the East where he will represent the College of Medicine, University of Southern California, at the meeting of the Association of American Medical Colleges at Cleveland, Ohio. On his homeward journey he will spend some time in Chicago and Denver in an investigation of tuberculosis sanatoria and work.

"Are you ready to ask me: What is man's spirit? My answer will be a question: What is matter? Answer

me, and then I will answer you. This I know: When the mystic union is severed, the material part returns to the earth, from whence it came, and the spirit goes to God who gave it," is the conclusion of a pamphlet on "The Duality of Man" by Dr. C. G. Savage of Nashville.

Dr. Horace B. Wing, one of the most highly respected physicians of Los Angeles, died of pneumonia following la grippe, February 12, age 50 years. He was assistant surgeon for the Western Division of the Santa Fe, Professor of Medicine in the College of Medicine of the University of Southern California, and universally esteemed. He was a gentleman by instinct and education. A wife, son and daughter survive him.

Dr. Allan McLane Hamilton is a grandson of Alexander Hamilton. He resides at 25 Madison Avenue, New York City. He was born in Brooklyn 59 years ago and is today one of the most noted specialists in mental and nervous diseases. We remember in 1874 when he was lecturer on nervous diseases in the Long Island College Hospital. He looked thin and hungry, and his clothes appeared to have had several years' experience at the cleaners. He is now very wealthy.

A very interesting paper on Anesthesia by Dr. Mary E. Hagadorn of Pasadena appeared in Southern California Practitioner for November, 1907. Our attention has been called to the fact that a portion of a book review, in some unaccountable manner, became incorporated in Dr. Hagadorn's article. On page 575, beginning with "the only thing in my experience," there is nearly a page of good stuff, most of it pertinent to Dr. Hagadorn's article, that belongs to the book review. A queer coincidence.

Dr. J. R. Cunningham, who graduated from Rush, class of 1891, has been appointed County Physician at Tonopah; Dr. Alex McIntyre, who graduated from Detroit College of Medicine, class of 1896, has been appointed County Physician at Manhattan, and Dr. James Arthur Wilkinson, who graduated from the Medical Department of Tulare University, class of 1902, has been appointed County Physician at Rhyolite. All in the State of Nevada.

Dr. F. M. Pottenger was one of the guests of honor at the first annual meeting of the Washington Association for the Prevention and Relief of Tuberculosis, held February 19 at Seattle. The subject of his talk was "What Can Be Gained by an Organized Effort in the Prevention of Tuberculosis." Coming south from Seattle he addressed large meetings in the interest of the California Association for the Study and Prevention of Tuberculosis at San Francisco, Oakland, San Jose and Salinas.

Dr. John S. Fulton, Secretary-General, writes us: "In connection with the approaching International Congress on Tuberculosis which will be held in Washington September 21 to October 12, 1908, a prize of \$1500 is offered for the best treatise that may be submitted to that Congress 'On the Relations of Atmospheric Air to Tuberculosis.' This prize should go to some physician in the great Southwest. For details address Charles D. Walcott, Secretary Smithsonian Institute, Washington, D. C."

"Rome is absolutely non malarial," says Dr. Luigi Egidi in an instructive pamphlet. Effective work has been done by the government and by private citizens purifying the city and its water supply. In the provinces of Italy where malaria still prevails the government carries on prophylactic treatment consisting of the daily administration of tabloids of quinin. Chocolate drops containing tannate of quinin are administered to children as they are pleasant to the palate and cause no gastro-intestinal trouble.

Dr. Howard G. Bartlett, born in 1866, graduate from Long Island College Hospital, class of 1891, and for several years a practicing physician at 106 W. Thomas Street, Rome, N. Y., was last June appointed special allotting agent for the Indians of Arizona, California and New Mexico. He is reported to have led a young teacher in the Indian School at Fort Mojave, on the Colorado River, to believe he was fancy free when he already had a living wife. The case was laid before President Roosevelt and he ordered the doctor's instant dismissal.

Las Vegas, New Mexico, mourns the death of Dr. B. D. Black, that occurred February 6, from pneumonia. He was born in Richland Center, Wis., thirty-three years ago, graduated from Rush Medical College, and located in Las Vegas in 1900. Dr. Black was City Physician for three years, secretary of the Territorial Board of Health four years; member of the Board of Managers of the Territorial Hospital for the Insane, and member of the City Council at the time of his death. An ideally useful citizen.

Dr. Lewis Rutherford Morris of 60 West 58th Street, New York City, has been, with his family, spending the winter in Los Angeles. Dr. Morris graduated from Bellevue in 1884 and completed his education abroad, and is one of the prominent practitioners of New York. He is son-in-law of Senator W. A. Clark of Montana. Dr. W. Jarvis Barlow, Dean of the College of Medicine of the University of Southern California, entertained Dr. Morris luncheon at the California Club where a few of the leading members of the profession of Los Angeles had the pleasure of meeting him.

Dr. Lewis Carpenter, formerly of 1498 Fulton Street, San Francisco, died in Indio, Riverside County, on Thursday, February 22, of heart disease, having enjoyed good health until two hours

before his death. Dr. Carpenter graduated from the Medical College of Indiana, class of 1879, and from the Missouri Medical College, class of 1885. He came to California in 1887 and located in Vallejo. After practicing there a few years he removed to San Francisco. He entered the Union army when but 18 years old and had an honorable record throughout the War of the Rebellion. He was buried in Los Angeles by the G. A. R.

The physicians of San Bernardino have petitioned the Board of Supervisors of that county to prohibit the use of the County Hospital for pay patients. They claim that a county hospital is maintained by the taxpayers for the care of the worthy poor and that there are other institutions especially adapted for the care of the worthy rich. They close their petition: "What, we, as practitioners of medicine, ask is equal justice to all business and special privileges to none. Most respectfully: H. W. Mills, C. D. Dickey, C. G. Campbell, J. R. Liverman, George B. Rowell, J. T. Colliver, J. A. Mack, J. M. Hurley, J. S. B. Richards, C. V. McConnico, Thomas M. Heard, Jr., J. W. Aldridge."

Dr. Howard A. Kelly, of Johns Hopkins University, is traveling at present through Mexico, looking up mining property in which he is heavily interested. Dr. Kelly will return to Mexico in June, accompanied by his daughter, Miss Olga Kelly; his sister, Mrs. R. P. Bradford, of Philadelphia; Dr. B. W. Goldsborough, of Cambridge, and probably by Dr. N. A. Powell, of the Toronto University. Miss Kelly has achieved quite a reputation as a collector of antiquities, and while in Mexico will make a study of the archeological treasures of the country. Dr. Kelly is the father of nine children, and it is his intention to send five of his boys to Mexico to study the mining industry.-The Lancet Clinic.

MISCELLANEOUS

TEMPERANCE AND THE DEATH RATE.

The president of one of the leading life insurance companies has sent us the following impressive statement. It is certainly worthy of study by every medical practitioner.

A very striking and suggestive diagram has just been issued showing the relative death rate per thousand (1) of the Royal Templars of Canada (all abstainers); (2) of other fraternal orders, the members of which are partly abstainers and partly non-abstainers; and (3) of non-abstainers, as found in the mortality reports of the United Kingdom Temperance and General Provident Institution. The substance of the diagram has been given before in our columns; but for the benefit of temperance workers in local option campaigns we print the diagram below:

Rate of mortality per 1000 per year.

	., 0
I.	Royal Templars (total absti-
	nence) 4.75
2.	Other fraternals (part abstain-
	ers and drinkers) 6.13
3.	Non-abstainers 7.80
	B. AGE, 40 TO 50.
I.	Royal Templars (total absti-
	nence) 6.75
2.	Other fraternals (part abstain-
	ers and drinkers) 8.75
3.	Non-abstainers11.40
	С. АСЕ, 50 ТО 60.
I.	Royal Templars (total absti-
	nence)13.25
2.	Other fraternals (part abstain-

A. AGE, 30 TO 40.

GREATER UNIVERSITY ALUMNI BANQUET.

ers and drinkers).....15.50

Non-abstainers20.50

At an alumni dinner of the University of Southern California, called The Greater University Banquet, given on February 20th, over 500 sat down to the tables.

President Boyard, who acted as toastmaster, sat at the center of the head table, flanked by the speakers of the evening and their ladies. He was received with great enthusiasm as he arose, at the close of the dinner, and proposed a cold-water toast to the President of the United States. As he mentioned one of the affiliated colleges after another, it was each time the signal for applause, and a college yell that made the doors rattle. So it went through the evening, and it was a truly great "boost."

Dr. Bovard said, in the course of his introductory talk:

"I came to Los Angeles in 1879, and the University was soon after organized, though my coming had nothing whatever to do with it. It grew out of the Los Angeles Academy, which had been organized in 1876. In all the departments we now have an enrollment of over 1300 students. The spirit of the institution is a spirit of democracy. The time was when the faculty stood upon pedestals to be looked up to; it is now a body of students, and the faculty is composed of the older members of the student body."

He said he believed men should be symmetrically educated, alive to the present and prepared for any emergency, and that such was the purpose of the University of Southern California.

Dr. W. W. Beckett was presented to speak for the College of Medicine, and was received with the wildest enthusiasm, for he is one of the first graduates of the institution.

"I remember well," he said, "the old college building on Aliso street, and the rest of the class remember the old building just across the street."

The latter was a brewery, and the refcrence brought a yell from the medicos and a great laugh from everybody else. Dr. Beckett stated that the school has sent out more than 200 doctors, some of whom are the leading practitioners of the city, and that while the faculty is not composed of great men, they are unsurpassed by the teachers in any other school. He started a boom for a College hospital, a dollar a day hospital, to give the best of care to the man with a small wage and keep him from losing his self respect by becoming a pauper. Dr. Beckett declared that the need of it is the greatest lack of the University.

"We're going to have it," declared Dr. Beckett, "and I have the assurance of leading members of the University that the day is not far distant when we will have the ground, if not a building already erected."

This was greeted with great applause. The inimitable Robert J. Burdette was the final speaker. His chief purpose was to raise the jollity of the banquet to a still higher pitch, and, of course, he succeeded.

The colleges represented in the banquet were: Liberal Arts, Medicine, Dentistry, Law, Music, Oratory, Fine Arts, Pharmacy, Theology.

THE CHLOROFORM CRIME.

At the meeting of the Western Surgical and Gynecological Association recently held in St. Louis reported by the Medical Record, Dr. L. W. Littig of Iowa City, Iowa, stated that he had sent a circular letter to 3500 physicians practising in Iowa. Eight hundred replies were received, many of them containing information which led to reports of fatalities by men who did not reply to his first letter. He had rejected reported chloroform fatalities occurring from two to four days after anesthesia, because he did not think it was possible to secure anything like reliable data in this class of cases. He had rejected ether fatalities occurring at the close of a long and difficult operation. He had excluded cases in which he thought that the operation itself was of sufficient magnitude to cause death on the operating table, or soon thereafter. He had excluded obstetric fatalities in which placenta previa or severe hemorrhage complicated delivery. He had excluded cases in which pneumonia or other lung complications followed gall-bladder or other abdominal work. The report contained 63 chloroform fatalities. Of these 63 fatalities 10 occurred in dental practice. One fatality was due to choking during anesthesia. There were 5 fatalities in confinement in which chloroform was used, and in which the reporter blamed the chloroform. There was one confinement fatality, in which ether was used and in which the reporter blamed the ether. There was one hyoscine-morphine, ether, chloroform sequence, and one chloroform ether sequence. There was one late chloroform fatality, with jaundice. The author concluded that (1) chloroform was vastly more dangerous than ether, and especially so in minor work, and at the beginning of administration. The chloroform ether sequence was especially bad. (2) In the class of work mentioned, chloroform was so much more dangerous than ether that its use should be most emphatically condemned, and that "the surgeon (quoting H. C. Wood, writing sixteen years ago or earlier) is not justified in using chloroform except under certain circumstances and for very definite reasons." (3) Chloroform was especially dangerous in dental work and should not be used. (4) Chloroform was not free from danger in obstetric practice.

PULLMAN PROHIBITION.

The Pullman Car Co. have issued an order as soon as their present stock is disposed of there will be no wine, beer or alcoholic liquors of any kind sold on their cars. Judge Charles A. Pollock, presiding judge of the third

district of North Dakota, writes a letter to a friend on the results of Prohibition in that State.

In harmony with the mandate of the constitution, the first State Legislature adopted a very stringent prohibitory law, the first section of which reads as follows:

"Any person, association or corporation who shall, within this State, directly or indirectly manufacture any spirituous, malt, vinous, fermented or other intoxicating liquor, or shall import any of the same for sale or gift as a beverage, or shall keep for sale. or sell or offer for sale, or gift, barter or trade, any of such intoxicating liquors as a beverage, shall for the first offense be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in any sum not less than two hundred, nor more than one thousand dollars, and be imprisoned in the county jail not less than ninety days nor more than one year; and for the second and every successive offense shall be deemed guilty of a felony, and be punished by imprisonment in the penitentiary not exceeding two years and not less than one year; provided, that registered pharmacists under the laws of this State may sell intoxicating liquors for medicinal, mechanical. scientific, and wine for sacramental purposes, as hereinafter provided."

At first the law was assailed in the courts, and for two years all sorts of questions involving the constitutionality of the law were raised. The law has been sustained in every particular, thus setting at rest all considerations involving its being a proper exercise of the police power of the State.

Judge Pollock in the letter tells this friend he has written many letters asking as to the working results of the law. These letters were addressed to their two United States Senators, Congressmen, legislators and all their district attorneys.

Upon the question of the influence

upon the young there was a very decided majority in favor of the law and its beneficial effect. Even from a county where the state's attorney admitted that there were a great many violations, he adds: "The fact that a man has to do something behind closed doors, and something criminal, keeps many men from drinking. The effect is especially noticeable upon the young people. There is a repellant instead of an attractive force at work."

I might add my own personal testimony in this matter, so far as it relates to the counties of Cass, Traill and Steele, the most populous district in the State, and the one over which I have liad the honor to preside as district judge for the last eleven years, and say that during that time the law has been so well obeyed that twice during recent years there was not a human being in jail in the entire district.

During license days we had approximately 160 saloons where now we have none, and "blind pigs" or places where liquor is unlawfully sold, are very few and constantly on the decrease. If any do exist it is in some concealed manner, rendering it difficult for the officers to discover them.

During license days the city of Fargo contained forty-one saloons, with a population of about 8000. Now we have none, with a population of 15,000. No empty buildings; our city is paved, lighted with electricity; owns its own water works, and has all modern improvements.

There is no question but that there has been a decrease in all those crimes directly resultant from the sale of liquor. In two counties of this district the sheriffs have but very little to do; the jails are empty almost all the time.

MEDICAL SYMPOSIUM SOCIETY.

The January meeting was held at the Barlow Medical Library, Wednesday evening, January 8. The program was

a symposium on acute and chronic cholicystitis and gall stones. In a very excellent paper, the Etiology, Pathology and Diagnosis was discussed by Dr. E. C. Moore. The second paper, "The Treatment," was by Dr. Rea Smith.

The papers were discussed by Drs. McNeil, Fulton, E. J. Cook, Godin, Taylor, Cochran and Donald Frick.

The February meeting was held Wednesday evening, February 12, in the offices of Drs. Albert Soiland and P. H. Sunde. The program was a symposium on Physical Therapeutics. First paper, "Light," by Dr. P. H. Sunde; second paper, "Hydro-Therapy," by Dr. J. B. Cook; third paper, "Electro-Therapy." by Dr. Albert Soiland. These papers brought forth a free and vigorous discussion, participated in by Drs. Mc-Neil, Ferbert, Ross Moore, E. J. Cook, C. W. Pierce, Guy Cochran, Ed Wiley. A. Soiland, Ray Taylor, W. W. Richardson, Wm. R. Moloney, P. H. Sunde, A. Godin, Donald Skeel, F. S. Dillingham, Ed. Dillon, Alfred Downs. Following the scientific meeting the society went into a social session, in the shape of a Dutch lunch and other things.

NURSES' HOSPITAL ASSOCIATION.

The California Hospital Nurses' Alumnae Association held their regular monthly meeting at the Nurses' Home. Monday, March 2nd.

After a short business meeting Dr. Walter Lindley gave a very interesting and helpful talk on the Relation of the Alumnae to the Hospital and the Physician. He was followed by Miss A. A. Williamson, assistant superintendent of the California Hospital, who spoke of "The Benefits of the Alumnae Association to the Nurses," showing how much may be accomplished by organization and united effort.

Both of these talks were very much enjoyed by the nurses present.

The officers of the Alumnae Association for this year are:

Miss Eva Johnson, president; Miss Lillian Simpson, first vice-president; Miss Ida Westover, second vice-president; Mr. Fred. Mason, secretary, and Miss Elizabeth Barbor, treasurer. Miss Claire Hardison, chairman Membership Committee; Miss Amelia Stewart, chairman Program Committee; Mrs. Emma P. Durbin, chairman News Committee; Miss Jessie B. Bice, chairman Music Committee.

Miss Franklin, '05, is still in San Francisco, where she was called to a case of scarlet fever five weeks ago.

Miss Thomas, '04, and Miss Leslie, '05, are enjoying their work in the D. C. Hospital at Morenci, Arizona. Miss Thomas is superintendent.

Miss Katherine Moore, '02, was a patient in the California Hospital a short time ago. Miss Moore was suffering from grippe and overwork.

Mrs. Constance Harshaw Wilson, '03, and Miss Elizabeth Hague, '03, who have been associated together in the Palo Alto Hospital, are planning a trip to Honolulu very soon. They will probably go to Japan and China also.

Miss Frances G. Belt, '05, was married Dec. 30 to Mr. A. F. Hilton of Berkeley, Cal.

Miss Hughes, '07, was married to Mr. Owens, Feb. 26. Mr. and Mrs. Owens will reside in Los Angeles.

The following nurses are out of the city on cases: Miss Treat, Pomona; Miss Bice, Camarillo; Miss Barbor, Ventura; Miss Hardison, Ontario; Mr. Giddings, Hollywood Hotel.

Miss Hope Glidden, '05, is night superintendent in the Santa Monica Hospital.

Miss Jessie Shekell, '03, is nursing in San Francisco. She expects to make that city her home in the future.

BOOK REVIEWS

OUR BOOK REVIEWS.

We are proud of this department of the SOUTHERN CALIFORNIA PRACTITIONER. It is the aim of the editor that each review, besides mentioning the merits and demerits of the work under consideration, shall also contain abstracts of practical value to the specialist, the general practitioner and the student.

Every book received by the Southern California Practitioner is handed to a prominent specialist for review.

For excellent matter we commend our readers especially to the reviews written by Dr. Wm. A. Edwards that appeared in our February issue. They are full of good things. Dr. F. M. Pottenger, Dr. H. Bert Ellis, Dr. Granville MacGowan, Dr. Geo. H. Kress, Dr. L. B. Stookey, Dr. Dudley Fulton, Dr. Geo, L. Cole and Dr. J. T. M. Allan all write on their specialties. The editor rarely reviews books as it can best be done by those actively at work in the field of which the works respectively treat. We appreciate the courtesy of publishers, but what we want and what our readers want is frank criticism pro and con. This is the only kind of a book review that is read. Neither fulsome, indiscriminate praise or carping, ill-natured fault-finding belong in a book review. What we want is meat, something to digest, matter that will increase our professional strength.

"THE INTEGRATIVE ACTION OF THE NERVOUS SYSTEM," by Chas. S. Sharington, D.Sc., M.D., Hon. Ll.D., Tor., F.R.S., Holt Professor of Physiology in the University of Liverpool, Honorary Member of the American Physiological Society, etc., with illustrations. New York, Scribner's Sons. 1906.

In this volume of some 400 pages, Prof. Sharington gives evidence of a vast amount of experiments and labor in studying the physiology and integral action of the central nervous system. We know of no author who has so minutely studied the reflexes of the nervous system, considering in order the inco-ordination in the simple reflex, the interaction between reflexes, and combined reflexes.

It would be quite impossible to discuss any particular points in detail. It may simply be said in general, that any one specially interested in this particular subject will find here an exhaustive review, in which the views of various investigators are given, in addition to the original work done by Prof. Sharington.

The volume very entertainingly takes up the consideration of some of the aspects of the reaction of the motor cortex of the brain, the effect of strychnin, tetanus toxins, etc., upon the different areas of the cerebral cortex.

Chapter 9 deals with the "Physiological Position and Dominance of the Brain," while the last chapter of the volume considers "Sensual Fusion."

At the end of the book is found a very complete bibliography, giving reference to practically all of the most important literature on the subject.

FULTON

SEXUAL INSTINCT.—Its Use and Dangers as Affecting Heredity and Morals. By James Scott, A.B. (Yale), M.D., C.M. (Edinburgh); Late Obstetrician to Columbia Hospital for Women, and Lying-in Asylum, Washington, D. C.; late Vice-President of the Medical Association of the District of Columbia, etc., etc. Second Edition, Revised and Enlarged. New York: E. B. Treat & Co., 241 West 23rd street. Cloth, \$2.

This work is full of such information as the person studying this subject desires. It is intended for both laymen and physicians and is consequently not over-technical. This volume of nearly 500 pages will be sent postpaid by the publishers for \$2.

TRANSACTIONS OF THE CONGRESS OF AMERICAN PHYSICIANS AND SUR-GEONS, Seventh Triennial Session, held at Washington, D. C., May 7th, 8th and 9th, 1907. Printed by the Congress, New Haven, Conn., 1907.

This volume contains, besides the business transactions of the Congress, papers on the following subjects: "The Historical Development and Relative Value of Laboratory and Clinical Methods in Diagnosis." Under this general heading, four papers were read, viz., "Evolution of the Idea of Experiment in Medicine;" "Neurological and Psychiatric Diagnosis;" "Chemical and Biological Methods of Diagnosis;" and "Physical Diagnosis," by Drs. William Osler, Lewellys F. Barker, Alfred Stengle and Richard C. Cabot, respectively.

Of these excellent papers, all of which are up to the standard to be expected of the authors, those of Stengle and Cabot have perhaps more of practical interest to both the clinician and laboratory worker of the present, than the other two, which deal more with the history and evolution of the subject.

No physician whose knowledge of, and experience in laboratory methods of diagnosis are insufficient to permit him to correctly estimate the value and limitations of the same, can afford to miss reading Stengle's paper.

Cabot deals with his subject in his usual epigramatic and forceful style. He says, "One may easily have too much, as well as too little exactness, but we cannot have too much clearness in the expression of our results;" and again, "To lay stress upon the functional capacity of an organ, rather than upon the presence and appearance of anatomical lesions, is one of the tendencies of modern diagnosis."

The second subject is, "The Comparative Value of the Medical and Surgical Treatment of the Immediate and Remote Results of Ulcer of the Stomach." J. H. Musser, M.D., discussed "The Contributions of Surgery to a Better Understanding of Gastric and

Duodenal Ulcer." In this paper Dr. Musser states impartially the advantages and dangers of both the medical and surgical treatment, besides giving numerous tables of statistics. William J. May, M.D., discussed "The Contributions of Surgery to a Better Understanding of Gastric and Duodenal Ulcer," while John C. Munro, M.D., read a paper on "A Consideration of the End-Results in Benign Lesions of the Stomach, Surgically Treated."

It would be impossible to discuss here the many important questions raised in these excellent papers. One cannot but be impressed, however, with the growing conservatism both in the medical and surgical treatment of ulcer, and of the much clearer definition of what conservatism means, than possessed only two or three years ago. If one were to attempt to summarize very briefly the present concensus of opinion, as drawn from this symposium, one might say, "Ulcer of the stomach should be treated medically, its complications surgically."

The volume closes with the address of the President of the Congress, Reginald H. Fitz, M.D., L.L.D., whose subject was "The Borderland of Medicine and Surgery," which, in addition to very entertainingly sketching the evolution of surgery, as such apart from medicine, presents some very timely and thoughtful warnings and suggestions to both the physician and surgeon of today.

FULTON.

THE PRACTICAL MEDICAL SERIES, comprising ten volumes on the Year's Progress in Medicine and Surgery under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago post-graduate medical school. Volume X. Nervous and Mental Disease, edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Policlinic; Clinical Professor of Nervous diseases in the Northwestern University Medical School; Ex-President Chicago Neurological society. Series 1907 Chicago: The Year Book Publishers, 40 Dearborn St.

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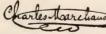
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h Street and Neptune Avenue, Borough of Brooklyn, C. I., NEW YORK. The present volume X of this series of 1907 rather exceeds in its general make up of interesting material the previous volumes of Nervous and Mental Diseases

On page 224 there is an interesting article on "Paranoia."

Chas. W. Burr is quoted quite extensively and has this to say;" "Paranoia never shortens life, most patients live to old age; none recover. The intensity of the symptoms may vary from time to time, and the quiet and discipline in hospitals may cause the delusions to become submerged temporarily, but they emerge again. Dementia finally ends the scene."

On page 227, Adolf Meyer is quoted quite extensively from the British Medical Journal of September 20, 1906 on "Dementia-Precox." "He believes that there are very few who do not consider Kraepelin's creation of dementia precox the great psychiatric advance in recent times. It is time to think of creating diseases entities among mental maladies, with due utilization of our knowledge of cause, course, and outcome. In the older text-books there is no truly helpful and convincing description of the factors which determine an unfavorable course in mental disorders. Instead of the usual hazy statements, Kraepelin has pointed out features which are common to a great number of the so-called terminal dements, and he has found them to exist from the very beginning in a very large number of all cases that ultimately deteriorate. The emphasis of these features, somewhat at the expense of the temporary pictures which have so far received the main attention, was a real stroke of genius."

THE OPERATING ROOM AND THE PATIENT. By Russell S. Fowler, M.D., Professor of Surgery, Brooklyn Post-graduate Medical School, Brooklyn, New York. Second Edition, Enlarged. Octavo volume of 284 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$2.00 net. W. B. Saunders Company, Philadelphia and London. For sale by Fowler Brothers.

This is a valuable work for Surgeon and Surgical nurse. This edition is much larger than the first edition several chapters on General considerations in the After-Treatment."

IMMUNE SERA, by Charles Bolduan of the New York Department of Health. Second edition revised and enlarged. 1907. John Wiley and Sons. \$1.50.

The first edition of Professor Wassermann's "Immune Sera" published in 1903 was welcomed on account of the concise and clear manner in which the subject of serum diagnosis and therapy was treated.

During the past four years the enthusiastic activity of many investigators has so changed our conception and widened our horizon of many phases of immunity that the original admirable monograph needed revision. The second edition is not a translation. While much of the material appearing in the first edition will be found in the present volume, many chapters are enlarged in scope, the discussions are more full, and four new chapters are added, namely on snake venoms and their antisera, agglutinins, opsonins, and serum sickness. The same clear style prevails.

In one respect it seems to the reviewer that a partial attitude is taken, namely in the discussion of opsonins. Our opsonic knowledge is based upon careful experimentation and clinical observation, and merits a fairer and more comprehensive treatment than is accorded.

The reviewer feels that the second edition deserves to be read widely since the subject is of vital interest, and since the literature on which it is based is scattered in foreign journals and inaccessible to the majority of physicians.

L. B. S.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eighth Revised Edition. Octavo of 1317 pages, fully illustrated. Philadelphia and London; W. B. Saunders Company,

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"The previous or seventh edition of this work, issued just two years since, has been critically revised throughout, with a view to bringing the present volume into consonance with our most recent positive knowledge of internal medicine. The substantial features and qualities which have recommended the former issues have been preserved, painstaking and conscientious attention having been bestowed upon the more practical phases of medical diseases—namely, synthetic induction diagnosis, differential diagnosis, and treatment.

"The study and presentation of the distinctions between one disease and another have been further elaborated, with accuracy of detail. Both the tables of points of differentiation and the illustra-

tions have been somewhat increased in number. A thorough acquaintance with the art of discrimination of disease, presenting points of similarity, however, presupposes a knowledge of the philosophy and nature of disease—of things learned in other departments of medicine, more particularly General and Special Pathology and Physiology.

"In endeavoring to effect improvement in the all-important subjects of treatment, the resources of preventive medicine, dietetics, and physiologic and medicinal therapeutics have been enlisted. Neither has the necessity of applying personal experience and observation, believed to be of special merit, been overlooked. A systematic effort has been made to improve the classification of the subjects treated, believing that a proper method of arrangements serves as a key to the details of the subject-matter."

This text book on Medicine, which has now reached its eighth edition has gradually come to be one of the standard text books in this line. The author has a particularly attractive style, and the ability to present the various subjects in a clear and forceful manner.

The volume has been enlarged until it comprises over 1300 pages, making it as exhaustive as possible in a single volume. The type is exceedingly good and the index well arranged and quite complete. It is a volume in which the celebrated author may justly take a great deal of pride, and at the same time reflects much credit upon the Medico-Chirurgical College of Philadelphia, the Institution of which Professor Anders has long been connected.

INTERNATIONAL CLINICS, a quarterly of illustrated clinical lectures and especially prepared original articles on Treatment. Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology Laryngology, Hygiene, and other topics of interest to students, and practitioners by leading members of the medical profession throughout the world, edited by W. T. Longcope, M.D., Philadelphia, U. S. A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; A. McPhedran, M.D., Toronto; Frank Billings, M.D., Chicago; Chas. H. Mayo, M.D., Rochester; Thos. H. Rotch, M. D., Eoston; John G. Clark, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; Joan Harold, M.D., London; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. IV. Seventeenth Series, 1907. Philadelphia and London: J. B. Lippincott Company, 1907

The 4th volume of the 17th series of the International Clinics comes to us again as a friend.

In the reviewer's opinion there is no work that can quite take the place of the International Clinics at the present time. To the young practitioner, who is just out of his college work, the perusal of this line of literature keeps him constantly in touch with the scienti-

fic men who are doing the world's work today in medicine. To the older practitioner who has been many years away from college, it comes as a reminder of the days when he was sitting patiently upon the benches trying to acquire knowledge that would ever be useful to him. By careful reading in this work alone he is kept in touch with the newer ideas, and instead of finding himself working along the lines persued years ago he may feel that he is keeping pace with the march of science.

The present volume contains articles by such men as Wainwright, of New York; Pancoast of Philadelphia; Palmer of Cincinnati; Warthin of Ann Arbor; Weil, Lermoyez, Calmette and Chantemesse of Paris; Tubby of London, and Alex. McPhedran of Toronto, Canada, beside a number of other men of greater or less prominence in various parts of the world.

On page 120, Professor Calmette has an interesting article on "The Ophthalmo-Reaction to Tuberculin, a means of diagnosing Tuberculosis in Man." This subject, which has been receiving considerable attention of late, and which has now been tried long enough to be tested out, is of exceeding interest to the medical profession of today. In conclusion occurs the following statement: "In a word, the Ophthalmo-Reaction to Tuberculin enables us to reach with almost absolute certainty a diagnosis in various forms of tuberculosis where clinical and bacteriological examination fails to give a definite result."

"As a method of exploration it is inoffensive, simple, efficaious, and elegant,
and in many cases practitioners will
derive the greatest assistance from its
use." . . . "Still more strongly does
it deserve to be substituted in the place
of the method of subcutaneous injections
of tuberculin, on account of its entire
safey."

THERAPEUTICAL HINTS

By Dr. Joseph Piket, Assistant at the Allgemeine Poliklinik, Vienna. From Berichte d. Versammlung Deut. Naturforscher u. Aerzte, September, 1907:

The treatment of gonorrhea taxes all the therapeutic resources at our command, among which internal remedies by no means rank as the least impor-Efforts to secure an internal remedy in gonorrhea have found successful culmination in arhovin, an addition-product of diphenylamine and esterified thymyl-benzoic-acid. By reason of its strongly antiseptic components, arhovin possesses a marked disinfectant action, which after its exhibition is still greater, as the remedy-i.e., its decomposition products—renders the urine acid, clears and imparts bacterioinhibitory properties to that excretion, and thus combats the pus cocci. Arhovin is not toxic, has no harmful effect on stomach or intestines, and does not irritate the kidneys. According to Burchard-Schlockow's work, it is absorbed in 20 to 25 minutes, and is excreted in altered form. The acidity of arhovin urine is so marked that usually it remains acid for 14 to 18 days. Piket's experience with it extends over two vears and includes a large number of severe cases, both of acute and chronic gonorrhea, gonorrheal cystitis and complications in the female. He summarizes his opinion as follows:

"Arhovin is readily taken and well borne, has no deleterious effect of any kind, limits secretion, hinders gonococcal growth, and possesses a marked sedative action. It is a valuable addition to the armamentarium—a remedy that no physician will want to dispense with, for a test leads to its permanent adoption."

The California Hospital, 1414 South Hope Street, Los Angeles, now has a department thoroughly equipped with large hot-air body machines, hot-air leg and joint machines, and electrical vibratory and massage machines for the treatment of rheumatism, neuralgia, neurasthenia and locomotor ataxia. Skillful operator from New York City always in attendance. Telephones Exchange 61.

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Lysol is more efficient than either bichloride or carbolic acid; first, because it is non-poisonous; second, because it does not affect the skin; third, it does not coagulate albumen and allow the germ to live inside its hardened capsule; fourth, the bactericidal action of Lysol is five times stronger than that of carbolic acid.

The surgeon, gynecologist, obstetrician, and general practitioner have in Lysol an ideal antiseptic, disinfectant and germicide for all uses, for it is stronger, safer and cheaper than other chemicals used for similar purposes.

Modern text-books uniformly recommend Lysol as an established diseasepreventing adjunct.

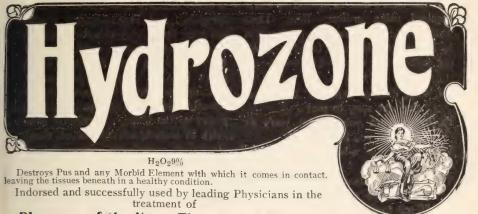
Current medical literature universally mentions Lysol in its clinical reports of major and minor operative procedures for the aseptic rendition of instruments, removing from the operator's hand all contamination or infective media, and in disinfecting and deodorizing contagious and offensive pathological conditions.

The list of hospitals, clinics, and dispensaries using Lysol has so grown that it is practically a directory of the best institutions of the kind in the world. The sale agents for the U. S., Lehn & Fink, New York, will supply descriptive literature upon request.

A New Method of Testing the FUNCTIONS OF THE DIGESTIVE APPARA-TUS. - Einhorn (Therapeutic Gazette, January, 1908) submits a method for investigating the functions of the intestinal tract, the principle of which is the administration of test substances with the food and observation of the effects of the digestive fluids upon these substances. Practically this test is made as follows: Patients are given in a gelatin capsule a string of beads with the following substances attached thereto: catgut, fishbone, meat, thymus, potato, mutton fat. After administering the capsule, every stool is examined with the stool-sieve until the beadstring has been recovered. If diarrhea is present the sifting may not be necessary, as the bead-string can readily be seen (usually at the bottom of a glass vessel.)

Under normal conditions the beadstring appears after one or two days. It is then rinsed in cold water and examined. If digestion is normal we find that catgut, meat and potato (except the skin) disappear entirely, thymus and fat almost entirely, whereas the fishbone usually disappears, but occasionally it may be present. The nuclei of the thymus always disappear. In pathological conditions deviations from the normal are observed, not only in regard to the time of recovery of the beads (disturbances of motility), but also in regard to the presence of the food substances (disturbances of the digestive function.) The author divides his cases of intestinal digestive disturbance into two groups: I. Those of pure nervous intestinal dyspepsia. Those of genuine intestinal dyspepsia. In that great class of cases of intestinal dyspepsia in which the starch digestion alone is disturbed, Taka-Diastase (Takamine) has proved of especial value.

AGAINST FLEAS.—L. O. Methods Howard says the following have been recommended: Fill a soup plate with soapsuds; in the center place a glass of water with a scum of kerosene on ton; place the soup plate on the floor in an infested room, and set fire to the kerosene at night. Fleas in the room will be attracted and will jump into the soapsuds. It is also said that houses may be rendered immune by dissolving alum in the whitewash or kalsomine applied to the interior walls, putting sheets of thick paper that have been dipped in a solution of alum under the floor matting and scattering pulverized alum in all crevices where insects might lodge or breed. Powdered alum may be sprinkled upon carpets already laid and then brushed or swept into their meshes with no injury to the carpets and with the certainty of banishment to many insect pests, including both moths and



Diseases of the Nose, Throat and Chest.—
Open Sores.—Skin Diseases.—Inflammatory and Purulent Diseases of the Ear.—Diseases of the Genito Urinary Organs.—
Inflammatory and Contagious Diseases of the Eyes, etc.

In order to prove the efficiency of HYDROZONE, I will send a 25c. bottle free

to any Physician upon receipt of 10c. to pay forwarding charges. NOTE.—A copy of the 18th edition of my book of 340 pages, on the "Rational Treatment of Diseases Characterized by the Presence of Pathogenic Germs," containing reprints of 210 unsolicited clinical reports, by leading contributors to Medical Literature, will be sent free to Physicians mentioning this journal.

Prepared only by

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

57-59 Prince Street, NEW YORK.

fleas. Sheets that have been soaked in alum water and then dried may profitably inclose those that are spread nearest to the sleeper.—*Science*.

ALPINE GLOW.

BY BLANCHE TRASK.

Tapering pines 'cross the sunset's glow, And the silvery hour of a moon slipped low:

With the bare-black boughs of the oak I know.

Thickly set with the mistletoe!

And the growing flame of the ev'ning star—

The form of a Dream which is followed afar!

A hope remembered which nothing can mar—

The heat or the dust, the fret or the jar! Hyllnil C.

San Jacinto Mountains.

One of the best inventions we have heard of is Lilly's Lime. The pharmacopoeial process of making lime water from ordinary unslaked lime is tedious and laborious. Eli Lilly & Company are now supplying an especially prepared calcium oxide powder free from impurities present in ordinary lime and of a physical condition favoring immediate hydration and rapid solution.



This is a fine powder in hermetically sealed vials. Each vial contains a quantity sufficient to make one gallon of lime water of strictly U. S. P. strength, by following directions. By using Lilly's Lime no decanting is necessary and an official lime water can be prepared in

one half hour's time as against 24 hours required using ordinary lime. Lime water so prepared has been submitted to inspectors who have found it meeting federal and state requirements.

* * *

Go 'way, Mistuh Skeeter! Don't you sing dat song to me!

I's hyud about yoh doin's; you's es tough as you kin be.

You's ben aroun' a-lunchin' on malaria an' things

Till you's jes' about as danj'us as a rattlesnake wif wings.

I didn' use to min' you when you come a-browsin' roun',

Ca'se I knowed a slap 'ud send you tumblin' senseless to de groun';

But since I hyud dem white folks I's as skyart as I kin be.

Go 'way, Mistuh Skeeter! Don't you sing dat song to me!

-Washington Star.

In five cases of pneumonia where the acute trouble did not end in complete resolution, but left circumscribed and affected areas which in my judgment were doomed to caseous degeneration, the liberal and persistent use of Antiphlogistine slowly but surely caused the absorption of the abnormal patches within the lungs and left them as normal as they were prior to the pneumonitis.—H. Enton, M.D., Long Island College Hospital, 1885, Brooklyn, N. Y.

Dr. H. Marion Sims, the father of gynaecology, said: "For severe Dysmenorrhea, I have found Hayden's Viburnum Compound of great service." See notes by Marion Sims, Vol. No. 2 of Grailly Hewitt on Diseases of Women.

Regulation of the diet, careful attention to the personal hygiene, and as much outdoor living as possible are the essential features of the careful treatment of blood depravity. A good tonic

* * *

is quite necessary in connection with the foregoing, and Pepto-Mangan (Gude) has been found very effective. Its pronounced hematogenic action is wellk..own, and the rapid hematosis which result from its administration unquestionably has a decided influence in coincidently raising the relative immunizing power of the blood. Reparative processes in wounds are stimulated, simple glandulous swellings disappear. tangible improvement in the general bodily nutrition rapidly follows. this is accomplished, moreover, without placing the slightest tax on the digestive tract, and the patient is thus able not only to derive the fullest benefits from every effort in his behalf, but the course of his recovery is progressive and unbroken. His vital resistance is materially raised and the balance of functional vigor restored to the normal That the extent to which this is accomplished measures the decreased liability to infectious disease, can no longer be doubted.

"A commonplace life, we say and we sigh;

But why should we sigh as we say?
The commonplace sun in the common
place sky

Makes up the commonplace day."

Samuel L. Tracy, M.D., of New York City, wisely says: "It is necessary to keep the mouth, nose, tonsils, etc., clean, because the mucous membrane of these parts, especially the tonsils, is not infrequently the port of entry of the germs of several infectious diseases, as influenza, pneumonia and acute rheumatism. To prevent their development, it is necessary to antiseptically cleanse their breeding places and keep them clean, especially if one spends a considerable time in the rooms of those who have influenza or pneumonia."

As a wash for the mouth and teeth.

or a gargle for the tonsils, a tablespoon-



LILLY'S ASEPTIC HYPODERMATIC TABLETS

Made under conditions of surgical cleanliness; every precaution is taken to insure an aseptic product. Furthermore, their contents are of proven physiological activity and accurate in grainage. These tablets are of the highest attainable solubility and absorbability and in emergencies the physician may rely on them to produce effects with the least possible delay.

Send for samples and pamphlet on Hypodermatic Medication.

ELI LILLY & COMPANY

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NEW ORLEANS

ful of Pond's Extract of Hamamelis Virginica in a half-glass of warm water will be found very agreeable and effect-tively antiseptic—not so much so, perhaps, because of its immediate destruction of bacteria, as by reason of its astringent and sedative action on inflamed areas, thus making sensitive and susceptible tissues less favorable locations for the growth and propagation of germ life, all of which also applies to the following combination as a spray for nose or throat:

R Sodii Bicarb.

Acidi Borici......aa 3ii Pond's Extract.......3iss Aq. destil.....q. s. ad. 3iv

The wash and spray should be used daily after breakfast and before retiring at night—oftener if much exposed—and to avoid the toxic dangers of substitutes

adulterated with wood alcohol and formaldehyde, only Pond's Extract (the standard among distillates of Hamamelis for over half a century) should be prescribed.

PLAGUE.

Simpson (Lancet) in his second Croonian lecture, discusses the pandemic of plague prevailing at present, especially in India, and states that the prevention of plague is the most important question for India and England at the present time. It is now accepted that the importation of plague into a healthy locality can be effected by an infected human being, or an infected rat, or infected clothes. Infected grain may also be an agert in the importation of the disease. Once imported, the dissemination of the disease is effected by

similar agents as those bringing about importation. Except in pneumonic cases rats are the principal agents in the dissemination of the disease, though personal contact, as in typhoid fever, plays a part. The writer accepts Simond's theory that the flea on the rat, leaving the rat dead from plague, and then biting man, transfers plague from the rat to the man. But the flea theory accounts for only a certain percentage of the fatal bubonic cases. It has been proved beyond dispute that the plague bacilli taken in contaminated food multiply while the food is in the intestines, enter through the lymph channels or lacteals of the intestines and invade the blood in swarms. The only qualification is that the microbes shall be so protected as not to be affected by the gastric juice.

GARGLE IN FOLLICULAR TONSILITIS.

George Laurens, in Gazette des Hopgle in cases of granular tonsilitis: itaux. recommends the following gar-

B Borate of sodium. 1½ drachms.
Glycerine 2 drachms.
Peppermint water. 10 drachms.
Aq. dest. 3½ ounces.

M. $-\mathcal{E}_{\mathcal{X}}$.

VAGINITIS.

The following combination is recommended by the *Med. Rev. of Revs.* in the treatment of vaginitis:

R Pulv. aluminis 1 ounce.
Zinci sulphitis 1 ounce.
Sodii biboratis 1 ounce.
Acid carbolic 1 ounce.
Water 6 ounces.

M. Sig.: A teaspoonful to a quart of lukewarm water, as a vaginal douche, twice daily.

TRANSMUTATION OF METALS.

Sir William Ramsay is reported to have declared that by making use of radium emanations it is possible to "degrade" copper to lithium. This is being heralded as the realization of the alchemist's dream of the transmutation of metals. It will be recalled, however, that discussion of the transmutation of elements at the meeting of the British Association last year arising from the apparent production of helium from radium led to a vigorous controversy in which Lord Kelvin and other eminent men repudiated the transmutation theory, which was strongly supported by Sir Oliver Lodge and others.

NIGHT SWEAT.

R Quinine Bisulph. ... 8 grains.
Tinct. hyoscyam. ... 1½ drachms.
Simple syrup ... ½ ounce.
Infus. chamomile ... 3½ ounces.

M. Sig.: One tablespoonful every three hours.

LOCAL APPLICATION IN MUMPS

Petrolatum)

Lard) each 150 grains.

M. ft. ung. Apply morning and evening, cover with a piece of rubber, and secure with a moderately tight bandage.

INHALATION IN CHRONIC BRONCHITIS.

The Bulletin Generale de Therapie recommends the inhalation, from a bottle provided with two tubes, of air saturated with the vapor of the following mixture:

R Ol. of eucatyptus 30 parts

Menthol 5 parts

Thymol 2 parts

Guaiacol, crystal 5 parts

Aquae 200 parts

In every case of sciatica it is advisable to make a thorough examination of the entire limb for the possible presence of some condition causing pressure upon the nerve, such as a bursitis in the gluteal region.

Antiphlogistine

(Inflammation's Antidote)



Pneumonia

Apply over the thoracic walls, front, sides and back, and cover with a cotton-lined cheesecloth jacket, as shown in the illustration.

Bronchitis

Apply over and beyond the sterno clavicular region. If a dressing is put on when symptoms of bronchial irritation first appear, a serious development may be prevented.

Pleurisy

Apply over and well beyond the boundaries of the inflammation.

In all cases Antiphlogistine must be applied at least ½ inch thick, as hot as the patient can bear comfortably and be covered with a plentiful supply of absorbent cotton and a bandage.

THE DENVER CHEMICAL MFG. CO. NEW YORK

CHRONIC GASTRITIS, WITH FLATULENCE.

M. Sig.: A tablespoonful before meals.—Ex.

DIARRHEA OF TYPHOID.

s. ad I ounce.
M. To be taken every two hours.

POTASSIUM IODIDE IN SYPHILIS.

A. Lieven has modified Spencer's formula for potassium iodide in such a way as to retain its essentials while ridding it of the unpleasant taste and color and avoiding the tendency to iodism.

R Potass. iodide I ounce. Ferri et ammon. cit... I drachm Strychnia nitrate . . I-3 grain. Oleosaccharum pep-

permint75 grains.

Orange flower water 4 ounces.

M. Sig.: One teaspoonful in a pint or more of water.

SMALL-POX IN VIENNA.

Small-pox is prevailing to such an extent in Vienna that it has been declared epidemic, and public meetings and processions have been forbidden. Within a week more than 166,000 persons were vaccinated.

"KULIN POLYGAMY."

A practice that goes by this name—an absurd one, since there is no polygamy about it in the sense in which we understand it—has lately been the subject of several letters published in the London

Times, as we learn from last Sunday's Sun. It seems to prevail among the Bengalis. Some of the Times's correspondents approve of it as a means of improving the physique of a race; others speak of its as "revolting" and "abhorrent." Among those who defend it is that interesting person, Mr. George Bernard Shaw. It is well known, of course, that in most communities many women eligible to matrimony fail to form a marital alliance with a suitable man and consequently remain spinsters. Their reproductive capacity is wasted. The Bengal practice purports to spring from a patriotic desire to save this waste. Mr. Shaw says: "What does a Bengali father do under the same circumstances? He selects a picked man, a Brahman representing the highest degree of culture and character in his class, and pays him £700 to enable his daughter to become the mother of a well-bred child."

There is no pretense of marriage, as we understand it; the Brahman is simply hired to beget a child. If more children are wanted, presumably other picked men may be provided for the woman. and perhaps same accounts for the use of the word polygamy. The whole business seems to us to be on a par with the breeding of domestic animals. The farmer buys the service of a selected stallion for his mare; the rich Bengali hires a picked man to serve his daughter. We must agree with those who call the practice revolting and abhorrent. It is the effort of medical men to promote the physical welfare of all human beings, but never at the expense of morality and social order; consequently we except that our British confreres will join us in protesting against approval of the strange Bengal custom.

Examine the rectum in all cases of urethritis independent of the cause and irrespective of the type, stage and severity of the process.



VOL. XXIII.

Los Angeles, April, 1908.

No. 4.

DR. WALTER LINDLEY, Editor.

DR. F. M. POTTENGER and DR. GEORGE H. KRESS, Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW,

Associated Editors.

HOT AIR—INTRODUCTION TO A SYMPOSIUM ON BIER'S HYPERAEMIA.

BY P. C. H. PAHL, M.D., LOS ANGELES.

Prof. Dr. August Bier, of Bonn, commenced about 17 years ago to use hyperaemia for the purpose of curing disease. He began with tuberculous conditions, but soon broadened out until during the lapse of these years his experience in observing its effects, both in physiological and pathological conditions, has been a very wide one.

In considering hyperaemia he always speaks of a local state. Active or arterial hyperaemia is a condition where the tissue and surrounding blood-vessels receive an increased flow of blood: passive or venous hyperaemia being a condition where these vessels are engorged by an obstruction to the outflow.

Active hyperaemia can be produced in many ways: By cutting certain sympathetic nerves, by the application of an Esmarch's bandage or by the application of counter irritants.

The most practical and useful method is by means of warmth. This has been used for thousands of years without the slightest idea that, perhaps, the only curative powers it possessed were due to the active hyperaemia it produced.

The body protects itself against abnormally high temperatures in two ways -first, through the perspiration, and. secondly, through an increased amount of blood which is caused to flow through the overheated parts, thus the rapid flowing arterial stream becomes a cooling stream. Bier holds that this increased flow of arterial blood is a most desirable condition and, in fact, is the only curative agent in those cases which are benefited. It is possible to produce warmth in many ways and to apply it to a certain part of the body; for example, hot applications of bran, moss, hops, hot fomentations, electric light, sand, earths and, lastly, hot air.

By the use of hot air the highest degree of temperature can be tolerated and effective hyperaemia is produced. When any of the other methods are used the hyperaemia produced seems to be ineffective in its results owing to the different conditions which have to

be contended with, such as pressure on the capillaries and arterioles, etc.

The author states that if he places the right forearm in a hot air apparatus he can tolerate 105° C., while if he places the left arm, at the same time, in hot water the highest temperature he could bear is 44¾°. After allowing both arms to remain the same length of time he observed that while they were both red the left arm showed a distinct bluish hue while the red of the right arm had a slight yellowish tinge; he therefore concluded that the hyperaemia of the right arm was more complete and of such a nature as to be much more curative.

The author has also made extensive experiments which go to prove that the hyperaemia produced, by hot air especially, is not limited to the skin surface, but penetrates throughout the entire thickness of the limb and experiments performed by Dr. Bier's assistant, Dr. Klapp, who placed rabbits in the hot air apparatus, demonstrated that the blood supply of the viscera could also be increased.

Dr. Bier took the hind leg of a young pig which, by the way, he claims is the most favorable animal upon which to experiment for the reason that the changes in color can readily be observed on the white skin; he cut all the soft parts of the limb except the large arteries, then he placed both hind limbs in the hot air apparatus and although the superficial circulation and all of the nerves had been cut he could observe no difference in the hyperaemia produced. It is therefore a proven fact that hyperaemia can be produced locally by heat when the part has been entirely separated from both the sympathetic and the central nervous system.

In an experiment upon a dog one of the limbs was placed in a hot air apparatus and after remaining there for thirty minutes the blood was allowed to flow from the femoral vein, also from the femoral vein of the limb remaining outside of the oven, with the result of the blood flowing from the limb which was in the state of hyperaemia was bright red and flowed from the vein in distinct pulsation while that of the other poured forth venous blood in the usual manner. Other experiments go to show that in order for a part of the body to withstand high degrees of heat a rapid flowing circulation is necessary.

The author placed his arm in a hot air apparatus and allowed the heat to gradually rise; he observed that when the thermometer reached 114° C. he could just endure it; at 115° C. he observed an uncomfortable burning under the finger nails and he found that he could bear the temperature from 114°-115° C. without great discomfort over some period of time, the limb, meantime, sweating profusely. He then used the same arm, applying a rubber constrictor above the elbow tight enough to produce a very pronounced passive hyperaemia. He then placed it for the same length of time in the same apparatus and the temperature was again gradually allowed to rise; he now found that with a temperature of 98° C. the burning beneath the nails became intolerable-here, also, the arm was moist with sweat. He repeated this last experiment with the constriction not quite tight enough to obliterate the radial pulse and found that he could now stand only 75° of heat.

While there was profuse sweating in these last two experiments he found that he could not tolerate nearly the same amount of temperature as before, thus proving that the absence of the cooling stream caused the inability to resist high degrees of temperature. In order to demonstrate these findings more conclusively the author made other experiments. He applied an Esmarch bandage to his arm, allowing it

to remain for sixteen minutes: upon removing this a severe hyperaemia naturally followed. He then put his arm in the hot air apparatus and found that he could readily tolerate 145° C. He then withdrew the arm and allowed it to cool, at the same time maintaining the oven temperature at 145°. Upon placing the cooled arm back in the oven he was compelled to instantly remove it as the heat was now intolerable.

Dr. Bier built his first hot air apparatus in 1891: he claims this to be the first one built suitable for the purpose. He built a wooden box adapted for the part of the body to be treated, padded the openings with felt and flannel, thus making it air tight. He produces heat by an alcohol lamp or gas flame and conducts it into the box in such a way as not to burn. A thermometer

indicates the temperature, but is not absolutely necessary as the patient receives as much heat as he can endure anyway. The fingers and toes are wrapped in cotton as they do not bear the heat as well as other parts.

There are numerous kinds of hot air apparatus on the market and as this method of treatment has been very popular in the United States in the past, many of the makes are familiar, the principles in all being the same.

In orthopedic practice I have found the use of hot air treatment rather disappointing. In the treatment of tuberculous joints it has been entirely replaced by the constrictor used with caution over short periods of time.

No doubt but the hot air treatment will find its most useful field in neuralgia, rheumatic joint affections, etc.

934 West Seventh St.

BIER'S HYPERAEMIA, OR, THE USE OF THE ELASTIC BANDAGE IN THE TREATMENT OF DISEASE.*

BY C. D. LOCKWOOD, M.D., PASADENA.

I shall discuss this subject under the following heads:

- I. Rationale of treatment.
- II. Method of application.
- III. Precautions to be observed.
- IV. Lesions to which it is applicable.
- I. RATIONALE OF TREATMENT: Bier's treatment, like most great discoveries in science, is simple and yet revolutionary in character.

Heretofore the classic treatment of congestive and inflammatory conditions has been rest, elevation and ice, or some evaporating and refrigerant lotion. The object being to diminish the blood supply by constricting the arterioles and favoring the return venous circulation.

This treatment was based upon the belief that congestion and increased blood supply furnished fuel for the infiammatory process and favored the breaking down of tissue.

The treatment by hyperaemia is directly opposite to these theories. Increased blood supply, according to this new method, favors healing in several ways:

- I. By furnishing more blood, the regenerative powers of the tissues are stimulated.
- 2. Increased leucocytosis favors the destruction of bacteria.
- 3. A sort of tuberculin or antitoxic effect may be produced by retaining the products of bacteria at the site of infection.
- 4. A local increase in the opsonic index according to Wright's theory.

Whether it be one or all of these factors in combination, certain it is that

^{*}Read before Los Angeles County Medical Society, January 31, 1908.

both active and passive hyperaemia hasten the absorption and destruction of inflammatory products, relieve pain, and promote regeneration.

II. METHOD OF APPLICATION: For all lesions of the extremities an ordinary Esmarch elastic bandage may be used, or a firmly woven elastic bandage of any sort. For the shoulder joint, and to produce hyperaemia in other portions of the body, special appliances are necessary. My paper is limited to the use of the elastic bandage.

The elastic bandage finds its best field in the treatment of diseased joints.

The bandage should be applied above the diseased focus, it should be distributed over a considerable area, one lap of the bandage slightly overlapping the preceding one.

The bandage should wander up and down between the diseased joint and the one above. It should be applied with sufficient firmness to produce a distinct stasis hyperaemia, but not sufficiently tight to cause pain or coldness of the parts distal to the diseased focus.

Bier at first advised that the bandage be left in place for eleven hours, but experience has proven that a much shorter time is efficacious,

One hour is about as long as the Landage should be left on at a time. It may be left on one hour and off the next, or applied for an hour at a time morning and evening. This must be governed somewhat by experience and the nature of the case.

Conditions often necessitate suspension of treatment for a week or ten days at a time.

If abscesses form, they should be cpened in the ordinary way and the bandage abandoned until the abscess has partly healed.

Sinuses are no contraindication to treatment, but one should be certain that all sequestra and foreign bodies have been removed before applying the bandage.

For infections about the fingers and toes, an ordinary elastic band may be slipped over the finger and above the phalangeal joint.

Hyperaemia of the shoulder joint may be obtained by encircling the shoulder with a piece of gum tubing.

Lesions about the head and neck are treated by slight constriction of the great vessels in the neck.

- III. PRECAUTIONS TO BE OBSERVED:
- I. Do not make sufficient pressure to interfere with nutrition.
- 2. Do not cause pain. Pain should be relieved, and if it is not relieved after the bandage has been on for a half hour or so, it means either that the bandage is not properly applied, or the case is not a suitable one for the treatment.
- 3. Avoid coldness of the extremity. The local temperature should be raised rather than lowered.
- 4. In weak, anemic and emaciated patients, put on a protecting bandage under the constrictor and apply a cotton supporting bandage to the distal parts.
- 5. In the very young and the very old, the treatment must be carefully watched.
- 6. Patients with heart disease, arterio sclerosis and diabetes are not suitable subjects for stasis.

IV. LESIONS TO WHICH THE TREAT-MENT IS APPLICABLE:

I. Acute surgical infections. All acute septic conditions about the fingers and toes respond promptly to the hyperemia treatment. If it be a finger or a toe, a simple elastic band is applied above the infected point and this is worn from one to twelve hours out of the twenty-four.

Long incisions, gauze packing and drainage tubes should be avoided.

If there is pus, a small puncture wound may be made to evacuate it. If tendon sheaths are involved, short, deep incisions to evacuate pus, but not sufficiently long to result in extensive scars and subsequent contraction.

In all injuries and infections of the feet or hands above the phalanges, the bandage should be applied about the ankle or wrist.

Besides the above, Bier recommends the treatment in almost every variety of acute infection, such as: Osteomyelitis, lymphadenitis, parotitis, erysipelas, mastoiditis, antum and frontal sinus disease.

It has been applied with apparent benefit in the treatment of cerebrospinal meningitis and pulmonary tuberculosis.

 Chronic surgical infections: Under this head comes that large class of tubercular joints.

This treatment gives better promise

of a useful and sound joint than any heretofore suggested.

Unless the joint is very painful or there is pus, the patient should be encouraged to use it after the elastic bandage is applied.

The prime object of the treatment is to preserve a movable joint.

Pus may be aspirated several times during treatment, but no free incisions are made. The treatment in this class of cases often requires months, but a complete cessation of the tuberculous process with good function may be confidently expected as the ultimate result. Dodworth Building.

HYPERAEMIA AS A CURATIVE AGENT.

BY W. W. KICHARDSON, M.D., LOS ANGELES, PROFESSOR OF ANATOMY, COLLEGE OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

The subject, which our Chairman has assigned to me, of the use of hyperaenia as a curative agent, is of compararively recent origin in the history of surgery. That is, its scientific applicacion to the treatment of various surgical affections is of recent origin. artificially produced hyperaemia, has peen used empirically from ancient times imes down to the present day, does not letract in the least from the credit due he man who has put the treatment ipon a scientific basis. Although Amproise Paré first intentionally produced typeraemia in the treatment of a surgical affection i.e. in delayed callus fornation, it is improbable that he grasped he real significance of his treatment. At any rate the principle was forgotten even in this limited application until n 1875 Nicoladoni described Dumreiche's rocedure of producing an artificial yperaemia for the purpose of increasng the nourishment to an ununited racture.

Beyond this limited application of the method no advance was made until in 1892 Professor August Bier published his article "Upon the conservative treatment of joint tuberculosis by a new method."

The observations of Farre and Travers in 1815, and of Louis in 1826, of the frequent combination of stenosis of the pulmonary artery and tuberculosis of the lung, and the contrary observation of Rokitansky in 1838 that tuberculosis never occurs in a lung which is in a condition of hyperaemia from valvular insufficiency, first attracted the attention of Bier to the possibility of using artificially produced hyperaemia in the treatment of tuberculosis of the joints. It was but a natural step to the idea of extending this treatment to other conditions, and though it has been the process of years, Bier has gradually elaborated a system of the application of this principle to other inflammatory affections, which is wonderful in its completeness.

The whole idea of increasing the hyperaemia of inflammation in order to affect its cure, was so contrary to the firmly fixed conception of the pathology and treatment of inflammation, that it is not to be wondered, that the profession was slow to accept the practice which Bier inaugurated.

His persistent teaching, writing and example has at last had its influence, and especially in Germany, his treatment has been accepted by the majority of surgeons, and is gradually gaining ground in other countries.

The unanimous expression of the German Surgical Congress of 1906 in its favors shows how wide has become its acceptance abroad.

American surgeons here and there have spasmodically given the treatment a trial, but only within the last year or two has the practice been persistently tried in a sufficient number of cases to warrant an opinion of its efficiency. In fact the cases treated by Professor Bier, so far outnumber that of anyone else, that the treatment may stand or fall upon his experience alone. That his judgment and honesty are to be trusted, there can be no doubt. His standing in the profession of his own country is shown not alone by his previous work, but by his recent advancement to the chair of surgery in the University of Berlin, so long held by the renowned and honored Professor E. von Bergmann.

The literature of the subject other than the writings of Bier and his assistants is not voluminous and consists as does this article, chiefly of a review of Bier's work. "Hyperaemie als Heilmittel," which has run through four editions and is now a work of over 400 pages.

I can attempt from a review of this work to set forth only the conclusions of Bier, from the voluminous experiments and practical experience or nis clinic, and that of other investigators.

The theory of hyperaemia as a curative agent, allows itself to be summed up into two postulates.

- I. The group of tissue changes which we are accustomed to class as inflammation, is but the attempt of nature to remove or render harmless, some insult to which the tissues have been subjected.
- 2. The characteristic and essential feature of inflammation is hyperaemia.

If we can accept these two statements, it follows from itself that the hyperaemia of inflammation is a beneficial process and should be encouraged rather than fought as has been the custom.

Since the recognition of bacteria as a causative agent in the production of some inflammations, we have been accustomed to distinguish between infective and non-infective inflammations. The tissue changes in each are identical, they differ only in etiology.

The reaction of the tissues to mechanical or chemical irritation is identical with their reaction to bacterial infection, differing only in degree. Yet we are accustomed to regard the one as physiological and reparative, the other as pathological and injurious. They differ in reality only in their causes, and it is these causes which are injurious, not the reactive changes in the tissues which we call inflammation.

The work of Metchnikoff and more recently of Erlich and Wright has shown that within the blood itself are contained the greatest thereapeutic agents for combating the cause of infective inflammations.

Not only are the leucocytes of the blood active agents in this work, but there are contained in the serum of the blood certain substances in solution, which so act upon the bacteria that they are rendered more vulnerable to the attack of the leucocytes. The latter constituent exists in the serum of ven-

ous as well as arterial blood and can exert its bactericidal action in passive even better than in active hyperaemia, owing to the slower current, and the saturation of the tissues with the serum.

The hyperaemia of increased physiological activity of an organ and the hyperaemia of growth are active and accompanied by an increase in the rapidity of the blood current. The hyperaemia of inflammation although at first active is soon followed by a slowing of the blood current in the dilated capillaries, and partakes more of the character of a passive hyperaemia.

Both varieties are utilized by Bier in his treatment, and in general it may be said that that form is selected which is already present in the process to be influenced.

For absorption of foreign and pathological processes the active, for nourishment and especially for the treatment of all infective inflammations the passive hyperaemia.

It will thus be seen that passive hyperaemia will find the most frequent indication and so we find in Bier's practice.

For the production of active hyperaemia there are many methods, as friction, electricity, chemical irritants, heat and cold. That cold does produce hyperaemia and not anaemia except as a transient action, is shown by the redness of a skin exposed for some time to its influence.

With the exception of dry heat it is probable, however that the hyperaemia produced by the action of these agents is not a purely active one, as the bluish tinge will indicate.

Practically the most useful method of producing the purest form of active hyperaemia is the use of hot air, and this is the method selected by Bier in the treatment, especially of those affections in which absorption is the chief indication, as in chronic joint stiffness or anchylosis from rheumatism, trauma, gonorrhoeal or other acute inflamma-

tions, chronic joint effusions, oedema following fractures, thrombosed varicose veins. But also in some acute affections this active hyperaemia is preferable, as in fractures, especially Colle's and Pott's sprains and contusions, neuralgias particularly of the fifth and sciatic nerves, lumbago, freezing, and threatening gangrene, senile or diabetic.

The apparatus for the hot air production of hyperaemia, in its simplest form consists of a wooden box of size and shape to fit the part treated, into which hot air is conducted by means of a chimney and tube, from a gas flame or spirit lamp. A large variety of these boxes is now furnished by the instrument makers, or they may be made by a cabinet maker to the measurements of the patient. They are ingeniously constructed to fit any part and are so arranged that the hot air does not come into immediate contact with the limb upon entering. The part to be treated is placed within the box without covering of any kind. The degree of heat is regulated by the size and distance of the flame, and controlled by a thermometer. The temperature must be gradually raised to a point as high as can be borne with comfort. A temperature of 100 c (212 F and even higher can be borne without discomfort and 114 c. (237 F) may be taken as the usual limit of endurance. The patient should be instructed that at no time must the heat cause pain or even an uncomfortable burning sensation. In the great majority of cases treatment should be limited to one hour daily, and only in extreme cases should the same part be subjected to treatment twice in the same day. Bier advises that after three or four weeks of the daily treatment a pause of from one to four weeks should follow. During the interval hot compresses should be worn at night.

For the application of hot air to limited areas of the surface as in neuralgias, The Bier-Eschbaum hot air douche is the simplest method by which a stream of hot air may be forced directly against the affected area.

The results of the hot air treatment, especially in chronic joint stiffness from any cause, seem from the experience of Bier and others, to exceed those from any other measure.

Even in these affections, however, the use of *passive hyperaemia* has an important role, and as its indications are found in a greater field of pathological conditions, it has found a much wider application in practice.

As has been said passive hyperaemia exceeds the active especially in its bactericidal effect. It is, therefore, selected in the treatment of inflammatory affections, both acute and chronic, in tuberculosis, in acute joint affections, rheumatic, septic, or gonorrheal, in osteomyelitis, lymphangitis, cellulitis, and in localized inflammation or suppuration. Especially in the treatment of delayed callus formation has passive hyperaemia been used since early times.

From the many means of producing this form of hyperaemia, Bier and his assistants have elaborated two methods of technic, which from their efficiency and ease of application are best suited for practical use. These are the use of the elastic bandage, and the vacuum cup. Of the two methods, the use of the bandage is the one which has had the most extensive trial and which has the widest field of usefullness in major surgery.

The bandage most often used, consists of the familiar Martin's Rubber bandage of thickness and width adapted to the part treated. This is wound many times about the limb well above the affected area, and fastened by a safety pin, adhesive strap or a clamp devised for the purpose.

To avoid injurious pressure, the turns of the bandage, if space allows, should not cover each other exactly but be spread over a wider area.

For the shoulder a large rubber tube is used, held in place by a bandage,

and for the head a piece of cotton elastic encircles the root of the neck and is fastened by hooks and eyes.

So simple sounds the application of the congestion bandage, but its correct use to produce the proper grade of hyperaemia, is not so simple, and can be acquired only from experience.

Upon the degree of hyperaemia and upon its duration, depends the success or failure of the treatment, and it was only after long experience and many failures that Bier arrived at his present technic. Experiment upon ones own limbs is of the greatest value in learning the correct application of the bandage, and of observing the various grades of hyperaemia.

Bier thus describes the effect upon himself of a bandage applied so as to produce a moderate grade of hyperaemia, the grade used in the great majority of cases; "I apply to my left arm a congestion bandage with such firmness that a mild passive hyperaemia is produced. The bandage is drawn only so tightly that no uncomfortable feeling is produced, and one may even forget its presence in his usual occupation.

First swell the subscutaneous veins of the back of the hand, then the large veins on the flexor surface of the forearm. The skin of the arm gradually becomes of a bluish color but the palm of the hand and extensor surface of the elbow become of a rosy tint. The back of the hand and the fingers are bright red. In the skin of the palm one notices many white flecks from millet seed to lentil in size, also in less numbers upon the dorsum.

Upon close examination are plainly seen the ordinarily invisible, delicate venous net-work of the skin. After three hours the skin of the forearm is of a uniform bluish red. The fingers, the elbow region and the back of the hand are bright red, the latter showing a more bluish tint along the larger veins.

The white flecks upon the palm have faded and are scarcely to be seen.

The large subcutaneous veins are less noticeable and the superficial venous network is disappearing. Long continued strong finger pressure now demonstrates beginning oedema upon the back of the hand. The pulse is full and strong, rather stronger than upon the opposite side.

Upon finger pressure the color of the skin disappears, to reappear immediately upon removal of the pressure.

Friction even upon the bluest areas produces a lively arterial bright red, which remains for a considerable time. After the bandage has remained unchanged for ten hours, the increasing cedema becomes especially noticeable. The greatest circumference of the limb has increased by 2 cm. There is pitting upon pressure everywhere. twenty hours arm and hand are uniformly oedematous, and the increase in circumference reaches 234 cm. The skin of the fingers, palm, back of the elbow and wrist are still bright red. The remainder of the skin of a bluish red. The subcutaneous veins are now no more plainly visible than upon the opposite arm, and this is due not to the oedema alone, but to the fact that they are really diminished in size, and are no longer to be felt as tense ridges.

Strong friction of a blueish area still produces a lively bright arterial redness. That no great obstruction exists to the return venous flow is shown by the fact that active movements of flexion and extension cause the arm to resume almost its normal color.

Upon baring the arms, they feel equally warm, but after long exposure the hyperaemie arm feels cooler to the touch, and there appear flecks of a cinnabar red color, which disappear upon pressure, to return again.

Upon an inflamed limb, this same degree of constriction will produce more marked results in accordance with the severity of the inflammation.

As a danger sign-post which we cannot approach with safety, the appearances of a too tightly bound limb are thus described by Bier:

"There is noticed below the bandage, a marked pulsation of the arteries. Even after two minutes the subcutaneous veins swell markedly and the skin changes color. Its ground tone is a bluish to grayish red. In the palm one notices bright red flecks, and upon the back of the elbow, the dorsum of the hand, and the radial side of the forearm there appear cinnabar red and yellow flecks. These cinnabar red flecks increase in size and number and flow together so that after seven minutes the greater part of the skin is of a cinnabar red color. The bluish red persists longest in the middle the flexor surface of the forearm and upon the dorsum of the hand.

"Pressure upon the cinnabar red skin produces a white fleck with immediate return of the color upon removal of the pressure.

"Upon the flexor surface just beneath the bandage, there appear numerous carmine red points from minute hemorphages.

"Subjectively there is a feeling of heaviness and weariness, with prickly sensations, and alternate feelings of heat and cold. The fingers become cold to the touch. After twenty minutes, almost the entire arm has become cinnabar red in color. By friction upon the back of the hand, a lively brighter hyperaemia is produced, but the color is not a simple rosy red, but has a distinct yellowish or copper colored tint. The punctiform hemorrhages increase, The veins which earlier were distended and tense, have become less plainly discernible to sight and touch. Upon the finger tips and in the palm appear yellowish white flecks. The limb is asleep and feels cold, but there is a subjective feeling of warmth in the arm. Upon further continuance of the congestion, the palm becomes ashen gray, with cinnabar red and pure white flecks intermingled. The cinnabar red flecks become white upon pressure and one can then see many punctiform hemorrhages.

"After forty minutes this strong constriction causes unbearable pain and the bandage must be removed.

"Immediately there is noticed a marked feeling of cold with a sensation of farradization, especially in the finger tips.

"The skin now takes on a rosy red, only the fingers remaining a dead white for one and a half minutes longer, when they too become red, and in the whole limb is a sensation of warmth. A feeling of stiffness and weariness in the arm remains for three-quarters of an hour.

"In the skin one sees many carmine red punctiform hemorrhages, which in twenty-four hours become bright or yellowish red. The skin of the limb shows a marked yellowish brown color, most noticeable in the bend of the elbow and just below it. Not until after the fourth day is the color of the skin again normal.

"During the constriction oedema has rapidly taken place, and after ten minutes the circumference of the arm has increased by 2 cm. After thirty to forty minutes, however, oedema is present only in a slight degree."

'I have gone to this great length in describing the appearances of a limb during the two grades of constriction, because it is of the utmost importance to distinguish the milder and useful grade from the stronger and harmful one.

The bandage must never be applied so tightly that it causes even the slightest pain, at most only a slight prickling at the end of an hour, and this only in short treatments. The appearance of the cinnabar red flecks is a signal that the band is too tight and it must be

removed, if the appearance of pain has not already given us the positive indication for its removal.

As no satisfactory method has been devised for measuring the degree of constriction, the appearance of the limb is our only guide, and it must be watched carefully and the band loosened or tightened until the desired degree of hyperaemia is reached.

The length of time which the bandage is allowed to remain, depends upon the nature of the affection to be treated.

After much experiment and many changes, Bier has established the following technic:

In acute inflammations and suppuration, the band is applied with sufficient snugness to produce a moderate hyperaemia, and allowed to remain twenty to twenty-two hours daily. During the remaining two to four hours, the limb is elevated in order to diminish the great oedema which the congestion has produced. It is then reapplied as before.

Only rarely does he use it for a shorter time and with longer pauses. Below 8 to 10 hours a day he goes only exceptionally, as experience has shown that this short time does not suffice.

• The effect produced by this long-continued moderate congestion upon an inflamed limb depends upon the grade of inflammation.

The signs of inflammation, with the exception of pain and general fever, are increased. The redness, oedema and swelling are exaggerated. Streaks of lymphangitis become brighter red, and at times the entire limb up to the bandage becomes of a bright red color. With improvement of the inflammation, these signs become less marked under the same degree of constriction. If this improvement is not noticed, an abscess has probably formed which must be incised.

With increasing improvement the duration of the constriction is gradually

diminished, until it is worn but I or 2 hours daily. It must not be discontinued before all signs have disappeared, for fear of a relapse.

During the constriction the most noticeable feature is the diminution of pain and general temperature, in the presence of increased inflammatory reaction. Never should the pain be increased, but always diminished. Increase of the pain is, with rare exceptions, an indication of improper application.

Bier admits that there are, very rarely, cases, especially of gonorrhoeal rheumatism, in which the pain is at first increased. Even in these cases, by carefully and gradually increasing the grade and duration of the hyperaemia, success will usually be obtained. Upon the degree and duration of the hyperaemia, depends the success of the treatment; if too weak or too short it is useless, if too strong or too long continued it is harmful. It must be carefully watched, and a knowledge of what constitutes the correct degree can be gained only by experience.

From an experience of eleven years in the treatment of acute inflammation by this method Bier says, that it constitutes absolutely wonderful means aborting incipient acute inflammations, and this will always remain one of its most thankful fields. The earlier it is instituted, the better the result, and for this reason its effect is best shown in the treatment of operation wounds which from any cause are infected. In more advanced cases, with necrosis and suppuration, the hyperaemia is still able to produce wonderful effects in limiting the gangrene, and converting the acute into a cold abscess, frequently with absorption of the pus. Bier, how ever, by no means advises delay in opening abscesses, but incises at once, and then continues the hyperaemia. Smaller incisions usually suffice unless severe disturbances of circulation have appeared. These incisions are only rarely drained and never tamponed, for Bier is of the opinion that the packing drains away nourishing fluids and favors necrosis.

In suppurating open wounds, under the treatment the discharge is increased, becomes more serous and is accompanied with earlier separation of already necrotic tissue, and earlier cessation of suppuration, and healing.

In the treatment of acute synovitis, especially in acute gonorrhoeal rheumatism, Bier has had much experience, and if we may accept his statements, the effect is almost magical. Within an hour from the application of the band the pain is greatly diminished, and the joint which previously could not be moved, nor even touched, owing to the great tenderness, may now be passively moved without the least pain, to the great astonishment of the patient. In these cases the band must be worn from 20 to 22 hours daily and must produce a marked oedema.

Active and passive movements must be instituted as early as the pain will allow, and as a rule no splints are worn excepting in the intervals of treatment. By these means ankylosis is prevented, and the joint restored to use in less time than by any other treatment yet known.

Similar effects are obtained in other acute joint infections. In acute rheumatism his experience has been limited, but the joints treated have all shown more rapid return to normal than those not so treated.

Even when suppuration within the joint has been demonstrated by test-puncture with needle or trochar, Bier has repeatedly been able, by means of this treatment, to cause subsidence of the inflammation, conversion of the hot into a cold abscess, with absorption of the pus, and recovery with a joint functionally perfect. If the favorable effects of the hyperaemia are not soon apparent, he advises removal of the pus

by aspiration or incision, and further continuance of the hyperaemia, but without drainage or tamponade. The cases which he reports in detail are wonderful to read.

In that most trying affection, acute phlegmonous inflammation of the tendon sheaths, the results which Bier reports, as regards the rapid subsidence of symptoms, the prevention of tendon sloughing, and the rapid recovery, with preservation of function, are certainly obtained by no other treatment.

Demonstrable abscesses are opened by a single large or many small incisions, without drainage nor tamponade, and in the interval between treatments, active and passive movements are practiced.

Even in bone inflammation or osteomvelitis the treatment exerts its good effect, and Bier cites case after case in which beginning osteomyelitis has been rapidly subdued, and abscess and necrosis prevented. Although in several abscesses have demonstrable cases healed without incision, Bier does not advise delay in opening abscesses when present, but evacuates the pus by one or more small incisions. The pus is then washed out with salt solution, but the abscess neither drained nor tamponed. The bone itself is not disturbed, unless sequestra are present, they are of course removed.

In the treatment of erysipelas Bier has had no great experience, but in the few cases he has handled, and from the reports of others, the effect has not been as striking as in other acute inflammations.

From the strikingly beneficial effects of hyperaemia in acute osteomyelitis of the long bones, it would seem rational to expect the same benefit in like conditions of the bones of the skull, the most frequently encountered of which is mastoiditis from inflammation of the middle ear. In 17 of these cases which Bier has treated up to 1906, the reports

tear out this expectation, as 16 of them healed after an average duration of three weeks, with complete restoration of function. Among them are included cases of severe affection with all the signs of severe mastoid involvement. abscess, and denudation of bone, and even several of those unusually severe cases, classed as Bezold's Mastoiditis, in which the pus perforating through the incisura mastoidia, passes downward beneath the M. sterno cleido mastoideus. Although frequently abscesses have healed without rupture nor incision, Bier advises incision as soon as pus is detected. The bone is not disturbed unless sequestra are evident.

Chronic mastoiditis with eburnation, cholesteatomata or sequestra have not shown as good results and will naturally require operation for removal of the foreign body.

In diseases of the eye Bier reports in his 1906 edition only two cases, both of dachryocystitis acuta, with rapid termination in recovery.

He quotes Renner as having seen in a case of Keratitis parenchymatosa, a considerable improvement. The treatment is worthy of further trial in both acute and chronic eye diseases.

Bier has used the treatment in a considerable number of cases of meningitis, acute and chronic, but is able to report but one case, a meningitis acuta following a mastoid operation, in which it has led to wholly favorable results.

Very favorable reports are made of some other acute affections of the head and neck, as parotitis, lymphadenitis, parulis, and even in diphtheria the treatment has been used by Hochhaus in 36 cases with such favorable results that he advises its further trial.

The bandage in all head cases is applied as above described, and in acute inflammatory cases is allowed to remain from 20 to 22 hours. It should produce a very marked oedema of the face, but no great discomfort.

Although the proper use of the congestion bandage gives such immediate and marked results in the treatment of acute infective diseases, it was not in these cases but in *joint tuberculosis* that Bier first used this treatment, and his first publication in 1892, concerned the treatment of joint tuberculosis alone.

While from the beginning the congestion band has been the chief reliance in the production of hyperaemia in joint tuberculosis, the technic of its application has undergone many changes since the earlier days, with great improvement in the results, and the avoidance of certain complications which attended the earlier technic.

In the very earliest cases the band was worn continuously, with the production of great and persistent oedema. Among many excellent results there appeared all too frequently, failures, characterized especially by the formation of many and large cold abscesses and the occasional appearance of acute inflammations or erysipelas. With the conviction that the chronic oedema was here to blame, the length of the treatments was gradually diminished and the present technic evolved which Bier describes as follows:

"Above the tuberculous joint a soft elastic rubber band is applied in many turns, so snugly that a strong venous hyperaemia appears. The band should under no circumstances cause pain, but on the contrary should relieve the pain. The limb should always remain warm, and the pulse should always be plainly felt below the bandage. The limb below the joint should not be bandaged. The band should be worn from I to 3 hours at the longest. A chronic oedema should be avoided, and if such appears it must be reduced by elevation of the limb in the intervals."

Even under this short application, acute cases show a decided reaction. The joint becomes fiery red, and is hot to the touch, at times blisters or acute

eczema appear, and the picture is that of acute inflammation. These cases show the most rapid improvement, and recover wholly in a few weeks. Unfortunately they are extremely rare.

The more chronic cases show less reaction, but a marked hyperaemia should be produced with considerable swelling of the limb, though demonstrable oedema will not appear in the short application of I hour.

As fixation of the limb is not only unnecessary, but undesirable in these cases, they may be treated ambulant. This is of especial importance to the practicing surgeon, as the bandage may be applied at the office, and the degree of hyperaemia carefully watched during the hour. After the desired effect is learned by the patient, the application may be entrusted to him or to his friends, and he need present himself only from time to time to report progress. A moderate amount of use of the limb is not only allowed, but encouraged, especially in the upper extremity.

For ankle and knee tuberculosis, to prevent deformity of the softened bones, a removable plaster cast or other apparatus should be worn when the patient stands, but when lying down, passive and active movement should be practiced as far as the pain will admit. During the course of the treatment abscesses will frequently form, but Bier regards this as a necessary phase in the course of the disease, and but the attempt of nature to throw off dead and useless tissue.

As soon as abscesses appear they should be incised, the contents pressed out, or drawn out by the suction cups, and an aseptic dressing applied. Sequestra when discovered should be removed, but the granulations should not be curetted, nor should the wounds be tamponed. The use of iodoform or other antiseptics is not to be combined with the hyperaemia treatment.

Cases complicated by open fistulae are treated in the same manner, combined with the suction cup as will be described later.

From the nature of tuberculous joint affections, a rapid recovery is not expected by any treatment, and Bier says that only in exceptional circumstances can the treatment be discontinued under nine months. The treatment is anplicable to joint tuberculosis at any age, and in any location in which the anatomical conditions allow the application of the bandage. As yet no satisfactory method has been found for its application to the hip joint. The best results have been attained in wrist, elbow and shoulder, the least satisfactory in kneejoint tuberculosis, as regards avoidance of mutilating operations and preservation of function. Bier states that while in no other joint has resection been necessary, of 13 knee-joints he has resected 8.

As contraindications to its use, he regards, of course, advanced tuberculosis in the lungs, amyloid degenerations of the organs, or such severe destruction of the joint that the probabilities of recovery with a useful limb, are remote.

Knee joint cases with large cold abscesses filling the entire joint, or with advanced destruction of bone and dislocation, are better suited to iodoform injections, or to resection or amputation.

In hydrops tuberculosis the iodoform injections are also used, as these cases are not suited to hyperaemia treatment, until the hydrops has disappeared.

All cases whether closed or open in which no contraindication exists are at first treated conservatively by hyperaemia without operation of any kind, beyond the opening of abscesses as they appear, and only when persistent trial has demonstrated the inability of hyperaemia to control the disease, is further operation resorted to.

Of other tuberculous affections, the most frequently treated by Bier has been that of the testicle. If both testicles are involved, a soft rubber tube is placed about the base of the scrotum and drawn so snugly that a marked hyperaemia is produced. If but one testicle is involved the sound organ is rushed up, and the tube placed about the diseased one alone. The tube is worn daily for from 1 to 3 hours. Bier has thus treated with success fistulous and ulcerating cases, but he has seen less benefit in the tuberculous indurations of the epididymis.

In tuberculosis of the tendon sheaths the results were poor in the earlier cases, but under improved technic the severest cases have healed rapidly and with good functional results. He proceeds as follows:

The hygroma is opened by a small incision through which the contents are carefully evacuated until even the last rice body is expressed. The small wound is dressed aseptically, and the band applied from I to 2 hours daily. Only when very small are they treated without evacuation.

He reports a very extensive hygroma of the flexor tendons of the hand and forearm, which under this treatment rapidly improved and after a year's treatment had healed so faultlessly that it could scarcely be told which hand had been affected.

In pure bone tuberculosis, Bier advises operative removal of the affected area, when it is possible without destroying the function of the limb.

In addition to the elastic bandage for the production of passive hyperaemia I have already mentioned the use of suction cups. This method was early used by Bier, but without results warranting the continuance, until more recently his assistant, Klapp, perfected a technic which has placed this among the most valuable methods of treatment.

From ancient times cupping has been

practiced with the idea of producing anaemia of deep or distant organs by drawing the blood to the surface.

Bier and his assistants have shown that the benefit accruing from this practice is unquestionably due to the opposite effect of producing hyperaemia of the tissues deep and superficial. apparatus consists of glass cups, of various sizes and shapes, adapted to the parts upon which they are to be used, from which the air is exhausted by means of a rubber bulb or suction pump, These may be obtained from the instrument makers in almost every conceivable pattern. The method of application is simple, but as in the use of the elastic bandage, the correct technic must be followed closely, or failures will be ascribed to the principle, when faulty application should bear the blame.

The part to be treated should be thickly smeared with vaseline, and before and after the treatment should be cleansed with benzine. The cup is applied directly to the affected area. In acute inflammations, the air exhaustion should be slight, only just sufficient to cause the glass to adhere. In chronic or tuberculous inflammations a greater exhaustion is used, but in neither should the least pain be produced. The treatment should last but three-quarters of an hour daily, and even for that time is not continuous, but is interrupted every five minutes with a 3-minute interval. That is to say, during threequarters of an hour, the cup is used intermittently, on 5 minutes and off 3.

In this manner in Bier's clinic have been treated over 1000 cases of furuncle, carbuncle, lubo, acute abscess, mastitis, infiltrations, infected fresh and old wounds, indolent granulating areas, insect bites, panaritium, paronychia and phlegmon of the floor of the mouth, and all with success, in a much shorter time than by the usual methods.

In all cases in which no abscesses have formed, the cup alone is used.

Abscesses are opened under the ethylchloride spray, by small incisions and the pus evacuated, but without drain nor tampon. In addition to the curative effect of the hyperaemia, the pus and necrotic tissue are sucked out of the wound, and the discharge ceases rapidly. For panaritium and other finger infections a special glass is provided, so constructed that it will contain the entire finger.

For mastitis a glass is used of large size to fit the breast, and if abscesses are present they are opened by incisions ½ to 1 cm. long, and in deep abscess if the drainage is not good a small rubber drain should be inserted.

By this means, mastitis is caused to heal in a much shorter time and with less cicatricial contraction than by the usual method of large incisions; moreover, the function of the breast is preserved and the child may again nurse, after healing has occurred.

In the treatment of open tuberculous joint affections, the use of the cup and bandage may be advantageously combined, the cup being used in the intervals, or larger especially constructed suction glasses are made, which, in a measure combine both methods.

These large suction glasses are also used in the treatment of ankylosis, as by ingenious devices, forced flexion and extension of the limb may be produced, and thus passive movement is combined with the hyperaemia.

That Bier has introduced into modern surgery a principle of great value, there can be no doubt. That in his hands this principle and his methods of applying it have produced better results than the older methods, no one who reads his book will doubt.

Recent reports from many sources lend the hope that in other hands it will prove of like benefit. As the matter now stands it is worthy of trial by all, but worthy of trying it are only those who will take the time and care to learn its correct technic.

SPECIAL APPLICATION TO DISEASES OF THE EYE AND EAR.

BY FRANK W. MILLER, M.D., LOS ANGELES.

Being constructed along conservative lines and having pursued so many new gods in the past, only to find them false and their theories untenable, I have not been wildly enthusiastic concerning this new principle of treatment and will admit in the beginning of this paper that my personal experience with stasis hyperaemia is extremely limited.

The diversified character of the reports concerning Bier's method as applied to the Eye and Ear are very confusing.

Kopetsky says: "When medicine received a new method of therapeutics and when such a line of treatment is not based upon a previously accepted theory, it is obvious that its empirical application to all sorts of cases is more or less a necessity until finally enough material has been subjected to trial and from the judgment of results obtained, the applicability of the suggested therapeutic agents eventually becomes limited to those cases wherein its empirical application has demonstrated the best practical results."

This likely is the best explanation of the (as yet) uncertain position that this method occupies.

The greatest number of opinions are from foreign scources for up to the present time in this country there has not been sufficient work done to justify a fair estimate of its value.

The Germans, of course, are the original investigators along this line and until they are more in accord as to the method, time and character of cases suitable, it will be well for us, who do so little investigating, to await their final verdict.

Old tried methods, producing satisfactory results should not be discarded too hastily.

In reading over the case histories and experience of a great variety of men, one is of often impressed with the fact that in their enthusiasm or bias there has been a carelessness in classification and diagnosis and a too great haste to report favorable terminal results.

For instance, several cases of socalled mastoiditis reported cured by this method were palpably ordinary acute purulent otitis with the evidence of mastoid tenderness which is not uncommon in children. Where the characteristics, well defined symptoms were present, we find the results were not favorable.

Neither must we forget that with all new agents, the unfavorable results are not published at first. Between the extreme enthusiasm of some and the negative attitude of others there is a conservative middle ground that at this time probably expresses the true status of affairs.

This treatment has been demonstrated to be effective only in acute or subacute cases and that acute exacerbations of chronic conditions must be eliminated. It is also agreed that the treatment must be only used in the most skilled manner, in properly selected cases and used early to be of benefit rather than harm and that the importance of proper surgery at the proper time must always be borne in mind. The valuable time lost in case of no benefit from the treatment must always be carefully considered for the dangers of delay are very grave ones.

Before taking up in detail its application to the Eye and Ear I desire to say that, in my opinion, the aspirating of fluids (pus, etc.) through an incision by means of the cups should not be properly considered an application of the principle of stasis hyperaemia.

EAR

Its application to diseases of the Ear resolves itself to the treatment of acute congestive and suppurative conditions. These are furiniculosis, acute calarrtral and purulent otitis media and mastoiditis. Both forms of the treatment are used but the cupping has largely given place to the elastic constriction of the neck. The latter being simpler in application and more effective.

The technique, according to Bier and

Heine, is as follows:

The patient is put to bed, paracentesis is performed and the ear irrigated. A slightly elastic bandage, from 1/2 to 11/2 inches in breadth is fastened around the neck by means of hooks and eyes. The pressure is sufficient to cause slight cyanosis of the face but not tight enough that pain is felt in the inflamed or congested region. To increase the hyperaemia the foot of the bed may be elevated.

The collar is to be worn for 22 out of the 24 hours but may be removed during the act of swallowing if it is uncomfortable.

Contrary to expectation this bandage

is usually well borne.

The relief of pain is variable but most reports show that it usually occurs immediately.

There is also noticed a change in the character of the pus, it becoming more

copious and watery.

This treatment should be used with great caution for in the aged and senile thrombi are easily formed and the likelihood of cerebral hemorrhage in cases of arterio-sclerosis always borne in mind.

As said before the reports of results are many and extremely variable, so I will not burden you with a long recita-

tion of them.

Bier first in 1905 reported 18 cases of purulent otitis media and mastoiditis treated by this method alone with 12 cures, the rest failing to react required operation.

These operative cases were unsuitable. for cholesteatoma and sequestra were

found to be present.

Since that time a better and more careful selection of suitable cases has been made.

Heine in Lucaes clinic reports 23 cases of otitis and mastoiditis. these 8 required operation, 9 were healed and 2 were apparently improved. In the remaining 4 cases the treatment

was incomplete.

did me.

Isemer at the Halle Clinic after an experience with 12 cases (11 acute, 1 chronic, 9 with mastoiditis) comes practically to the same conclusions Fleischmann viz., 1st. That it is not without danger because we are likely overlook the timely operation. 2nd, Its applicability cannot be established. 3rd, In otitis due to diplococci it is especially dangerous. 4th, Its value over standard methods is questionable.

Kopetsky in this country is entirely favorable to its proper application in well selected cases. These reports could be continued almost indefinitely but I am sure it would only bore you and lead you to an indefinite conclusion as it

EYE.

The reports of its application to the Eye are no less variable than those of the Ear.

Hesse reports 23 cases of serpigenous ulcer treated by the suction method with cups especially designed by him with 18 markedly beneficial results, rapid healing and an unusually thin scar.

Renner on the other hand found that by the constriction method ulcus serpens was not benefited but that 5 cases of interstilial keratitis were improved.

Romer's experience with 5 cases of parenchymatous keratitis was similar to Renner's, all showing improvement in from two to four weeks. His benefit in ulcus serpens was negatvie. All other eye conditions evidently were not considered suitable for treatment.

To summarize: The present status of Bier's method as applied to Eye and Par is so chaotic that until its position as a therapeutic principle is more definitely established, its value is questionable and should be applied (if at all) very cautiously and with the fact always prominent that it is an extremely dangerous and uncertain agent.

H. W. Hellman Bldg.

THE LIMITATIONS TO THE USE OF ANTISEPTICS AND VACCINES IN THE MODERN TREATMENT OF PATHOGENIC BACTERIAL INVASIONS.*

BY GEORGE MARTYN, M.D., LOS ANGELES, CAL.

When your president asked me to read you a paper on the work I am the more closely identified with, I cast around me as to how I could be of most service to you—how to help you gather up the facts—marshal them and weigh them so that your judgment should be clear and untrammeled by technicalities.

The study of the means of repelling bacterial invasion has ever been fascinating. In 1798 Jenner published "An Inquiry Into the Causes and Effects of the Variola Vaccine," giving the world the results of his experiments on smallpox and the means of producing immunity against it. That was an epoch in medical science stretching its influence over our time, for it was the genesis of the modern vaccine treatment. Pasteur carried on the work commenced by Jenner, endeavoring in many ways to produce immunity by innoculation-mostly in an attenuated form, either of the bacterial organism themselves or the products derived from them.

In 1860 Lord Lister published his studies in antiseptics, which will hand his name down to immortality. As Sir Frederick Treves says: "Lister created anew the ancient art of healing and removed the cloud that had stood for centuries between great principles and successful practice." He himself was one of the first to abandon needless features of his original system when he had proved that scrupulous a-sepsis was the real secret. Only those who have known the labor of love it was to work under that revered teacher as I do, can realize what an immense force he has been, not only in his own country, but in the world. Here, then, we have the inception of the modern methods of treating bacterial invasion and tonight it will be profitable for us to inquire into how far they have been successful—how far the analogy of the present warrants our assumption in the future; for the public looks to us—we cannot escape our responsibility—let us judge then; that is our high calling.

There are only two means by which we can encompass the destruction of pathogenic bacterial organisms that have obtained a lodgement in the body. The older or antiseptic which will ever be associated with Lord Lister, and the modern or vaccine treatment elaborated by Sir A. Wright. It will be well for us to consider carefully how far these two methods in our hands have justified their usage; as to what point in the light of exact laboratory methods they carry us in the grim struggle of life and death. From the beginning let us realize that life is just as real, just as tenaciously fought for by the smallest organism as in the more complex: Nature is careless of the life, but careful of the type.

Antiseptics admit of three general usages:

- (1.) Locally to destroy localized bacterial infection.
- (2.) To stay and prevent putrefaction in discharges.
- (3.) Internally to prevent and kill bacterial growth in the blood or in parts of the organism which can only be reached by means of the blood.

There is no doubt that antiseptic irrigations suppress and prevent putrefaction.

On quite another footing stands the use of antiseptics internally; their use is quite empirical—witness their usage in

^{*}Read before the Los Angeles County Medical Association, January 24, 1908.

typhoid fever; there is no evidence that they enter or are carried by the blood stream as such, and as great an authority as Lister testifies to their inefficiency. Fortunately for the patients, a majority of these chemicals meet one of the two objects which Hippocrates says the physician should always have in view—they do no harm.

The action of antiseptics locally admits of much more scientific probing, and it is here that the physiological chemist comes to the aid of our art and puts theories to the test of chemical reaction and the microscope, and I, for one, welcome a future that will give him a greater part in our deliberations; it is largely on his work that our theories must stand or fall. One great fact is now universally accepted—that antiseptics have a far greater attraction for the constituent elements of the body than for any bacteria—Ehrlich has postulated this-how, then, can we hope to check bacterial growth in the vital tissues of the organism by the use of antiseptics?' I am aware that the dominant belief is that this method of treatment is effective; it is in that belief that the surgeon introduces antiseptics into septic wounds and ofttimes abscess cavities, to-wit, carbuncles. It is in this faith that the physician uses antiseptic inhalations in pulmonary infections; and it is in this faith that the dermatologist, laryngologist, aurist, gynaecologist and genito-urinary specialists are each strenuous in the application of antiseptics to the particular province of the body which he takes under his care. Now on what basis lies this faith? How far does it tally with exact chemico-physiological facts? And significant in this connection is the abandonment by general consent of antiseptics in ordinary surgical wounds and abscess cavities. Significant again is it that radical operation and curetting is surely taking the place of antiseptic treatment of bacterial infections of mucous membranes. Above all is it significant that so distinguished a

dermatologist as Sabourand should sum up the results of antiseptic treatment of bacterial diseases of the skin as follows: "Curious, indeed, is the failure of antiseptics in connection with the treatment of bacterial diseases of the skin. Quite colossal were the expectations which were entertained with regard to what would be effected. What has actually been accomplished by antiseptics amounts in point of fact to almost nothing."

The results obtained in connection with pulmonary infections by antiseptic inhalations and bacterial infections of the genito-urinary passages by antiseptics are neither better nor worse than those obtained in connection with diseases of the skin-what other result could have been expected? Antiseptics could only destroy or effect those bacteria with which they come in contact. It is obvious that in bacterial invasions of the skin and mucous membranes, the infecting bacteria will not be all lying on the surface, and even if they were, they would not be limited to those regions accessible to the antiseptics, and from this it follows that it would be quite unreasonable to expect complete sterilization from any application of antiseptics. Invariably there will be a residue of bacteria which survive and multiply, soon reoccupying the disinfected area. this is not all—the antiseptic will not add its anti-bacterial power to the antibacterial power of the living organism; nay, it will absolutely antagonize the protective forces which the living organism has at its command. It will paralyze the phagocytes, abolishing at the same time the antibacterial power of The full import of this blood stream. is borne in on us when we realize that no cell, falling though it be to the depth of degeneracy or growing to the height of usefulness, but lies bathed in this fluid. The disinfected surface will thus by the action of these very antiseptics be left swept and garnished, awaiting reoccupation by the expropriated bacteria. But beyond all this the antiseptic

actually injures the histological elements of the tissues; actually prepares the ground where they would rest. This injury is seen chiefly in the capillaries supplying the tissue to which it is applied, leading to an inevitable outpouring of lymph on the disinfected surface. That outpouring will not only wash away the antiseptic, but it will in the case of a skin surface, convert the natural dry keratin armour of the normal epidermis into a sopping lymph-sodden blanket, in which bacteria easily establish themselves and thrive and multiply-thus, then, by devious paths we arrive at the same conclusion. Our faith in antiseptics, in the light of modern chemical physiology, is misplaced. It has been tried on the most extensive scale and has failed most conspicuously in tuberculosis. To what, then, shall we turn?

I propose to discuss with you nature's own method of immunization; this is our alternative method of treating bacterial infection. Koch, in 1800, was the first to attempt the cure of an infection by a specific remedy, viz., tuberculosis by tuberculin. No one can recover from bacterial disease, be it acute or chronic. except through the agency of protective substances produced in his organism. No one can acquire protection against a bacterial disease except by this production of protective substances; and finally—no one can live in the presence of infection and repel that infection, ex cept by the aid of the protective substances of his blood-that complex fluid that carries the power of life and death in its flood.

It is of the utmost importance that it should come home to you that we are dealing here not with mere speculation and theories unbased on facts, but with a generalization that rests upon a mass of verifiable facts. When we find a contested conclusion to rest upon a firm basis of experiment, we are entitled to incorporate it in a definite manner into

our corpus of knowledge; where we find a flaw in the chain of reasoning, we are entitled to reject and put far from us the conclusion and go back to our unencumbered foundations. The studies of Leishman on phagocytosis paved the way for Wright's discoveries on the bactericidal or protective agents in the blood. By the aid of a simple expedient it is now possible, not only to demonstrate in a drop of blood the protective substances which are connected with all our ordinary bacterial diseases, but also to accurately measure the content of the blood in these substances. By the help of these methods Wright has conclusively proved that-

- (1.) The blood of those who become the subject of bacterial invasion is deficient in these essential protective substances; and
- (2.) That by an injection of corresponding bacterial vaccines, the content of the blood in protective substances can in practically all cases be increased.

What do we understand by protective substances? They may be defined as substances which enter into destructive chemical combination with bacteria or other foreign elements introduced into the organism; such protective substances are never absent from the blood. We can, for instance, in the case of every sample of human blood, demonstrate the presence in it of protective substances which enter into chemical combination with the tubercle bacillus A vaccine therefore is any chemical substance which, when introduced int: the organism, causes there an elaboration of protective substances.

So much for the meaning of our terms. We can now enquire in what manner the introduction of a vaccine into the system is connected with a new formation of protective substances in the organism, for it is on the thorough understanding of this that the whole fabric of vaccine therapy abides. A

bacterial vaccine is always a derivative of the bacterial protoplasm; this, immediately on inoculation, enters into chemical combination with the bacteriadestroying elements already present in the organism; thus withdrawing from the organism a certain amount of protective substances; under this stimulus the cells of the organism are stirred into activity, with the result that the bacteriotropic substances, which have been withdrawn, are returned with usury; but further—the stimulus is specific to the bacterial protoplasm introduced. Let me make this quite clear. Take for instance staphylococcal vaccine-this, if properly made, will consist of millions of tiny particles of the sterilized staphylococci, both entire organisms and debris of those ground up, but however minute the particle introduced, the very injection and phagocytosis of that particle stimulates the cell to produce the protective substance necessary to ingestion of that specific organism and that only. The whole crux of the Opsonic index and its practical application in the measurement of the protective power of the blood against special organisms rests on the thorough understanding of this fact-it is the keynote of our work.

This conception will serve to impress upon your minds the sequence of events that can actually be observed to occur. We shall see that the process of bacterial inoculation as applied to a patient who is the subject of a bacterial invasion is in reality a process of temporarily taking away from a patient's power of resistance with a view to his receiving back that power with usury. Immediately after the injection of the vaccine there supervenes, as shown by Sir A. Wright and his fellow workers, a negative phase, that is a phase or vatiable period of time, during which there is a diminished content of protective substances in the blood—as a natural postulate of our stated case, it is the

time at the very beginning of phagocytosis when the vaccine-a sterile suspension of bacterial protoplasm is being ingested by the phagocytes. After a very short time this stimulation of the cells produces an over abundance of protective substances which can be and are utilized by the organism to destroy the living bacteria of the same kind. This period is the Positive Phase. This over abundance of protective substances is rapidly used up by the organism, in destroying the living invading bacteria, but leaves behind in the blood a more or less permanently increased content of protective substances, ready for use if the emergency occurs-immunity. All this refers to a single large dose of vaccine, sufficiently large to produce a constitutional effect, but when only a small dose of vaccine is inoculated, the negative phase may be so fugitive as hardly to appear on the record, and in this case the positive phase will also be diminished. When an unduly large dose of vaccine is inoculated, the negative phase is prolonged, even to the point of entire default of a positive phase; thus then the consecutive steps of the immunization conveyed by vaccination are clear to us. One point I am sure will occur to all of us when reviewing them, viz.: the importance of the dosage—we see how profoundly the organism must be affected by the amount of vaccine inoculated. On the positive phase and its length depends our success or failure; nay, if the negative phase is intense, as seen in unduly large doses, it may well spell absolute disaster, and of still more importance even-a small appropriate dose may, if repeated before its negative phase has become positive with its healing power, superimpose another negative phase, on the previous one, both negative and positive phases being cumulative. The importance of the dosage will now be quite clear to you. Now this is a mighty power in our hands, and it be-

hooves us to see that it is not abused; only scientific methods can assure this. It will be obvious that if we, in the case of a patient who is already the subject of a bacterial invasion, produce by the injection of an excessive dose of vaccine a prolonged and well marked negative phase, we shall, instead of benefitting that patient, bring about conditions which will enable the living bacteria in his organism to run riot-to overwhelm even to the point of death itself. And if dosage is essential in the case of a single inoculation, how much more so is it when we undertake a series of successive inoculations. may, in other words, by successive inoculations, raise the patient by successive steps to a higher level of immunity which spells recovery, or conversely bring him down by successive steps to a lower level than when he started, carrying disaster and failure with it. You will naturally want to know how, if dosage is of such paramount importance, we can guage it—that is the corollary to our problem. The certainty of protective vaccination lies in that and I can not insist on this too strongly. Shall I put it to you as it appears to me? We can select the appropriate dose and time only by examining the blood and measuring the amount of protective substances in it, in each case immediately before inoculation; exception has been taken in some quarters to comparative inaccuracy here, as a certain timeroughly two hours-must elapse between this examination and the inoculation, but for all practical purposes it has been found that the error due to this can with safety be ignored. I, myself, find that in cases where successive inoculations are made at appropriate intervals there is practically no difference in the index in this length of time, and yet I can quite realize that in very acute cases where the drain on the protective substances in the blood is immense, even two hours may be a source of serious error, but even here our knowledge of the vital processes shows us that safety lies in minimum doses and frequent examination.

I want to impress on you, especially those who would enter this fascinating field, that it demands the most exacting labor. The laborer must not spare himself; every detail, however insignificant. bears an equal importance in the deductions to be drawn. Absolutely nothing can be taken for granted; never in the whole realm of medicine has the personal equation been so important: the exactly trained scientific mind which will judge and well weigh facts considering no labor too great. Lives are to be saved; science demands of her votaries self-abnegation. Alway and ever insist that no inoculation of any kind be given without this blood index has been taken. The writing on the wall is clear for those to read who will: success or disaster will inevitably abide by it. The danger of working in the dark has never been more clearly exemplified than in the original use of Koch's old tuberculin. I can well remember when it was loudly proclaimed a universal panacea for tuberculosis, and my old hospital, King's College, London, set aside a complete ward to its use; every form of tubercular disease was congregated there; large, and in the light of modern work, enormous doses were injected every few days and what is more—in progressively increasing inoculations. The reaction in most cases was terrific and in many a fatal termination rapidly supervened; what wonder that the whole process and its theory fell into disrepute? Follow with me the sequence: Wright and his band of enthusiastic workers took up the tangled skeins-they realized that Koch's theory stood on facts: where then the error? You will realize it was the dosage and time they lacked-the Index. Koch had produced in many cases enormous negative phases unfollowed by any positive phase, and so the organism was literally drained of its protective substance. The tubercle, from being localized, ran riot with naught to stop them and the result was never in doubt. In other cases negative phases were superimposed on negative, as we have seen is possible. There too lay disaster and so it is a story of initial failure which any of us now could have predicted; but the loss has been converted into magnificent gain; we know now, and the future in our hands should be brilliant if we tire not of exactitude—there lies success.

You may conjecture that the chances of negative cumulation are very remote if during a course of inocuiations the clinical symptoms are carefully watched.

There is no doubt that a serious negative phase will be apparent from clinical symptoms, but my contention is that the warning will be too late-it will be conveyed to you only after you have lost the advantage gained by the foregoing inoculations, thereby undoing all the good you have done. Your patient, who has been raised to a high level of immunity by successive small inoculations, will sooner or later, if too much is asked of him, simply slide down suddenly to the negative side of the line dividing success and failure, and if you have not been carefully measuring the amount of protective substance in his blood, your patient will probably have reached a lower level of resistance than that from which he originally started before symptoms of intoxication drew your attention to the fact. These are the fundamental principles of the science of immunization. You will remember that a bacterial vaccine is a substance which is capable of inducing an elaboration of protective substances in the organism. Our knowledge of the changes which are effected in the bacterial protoplasm under the influence of these substances in the blood fluids is extremely incomplete. So much, however, already stands fast:

- (1) The bacteria may be killed without being dissolved;
- (2) The bacteria may not only be killed but dissolved. These two effects may be grouped together as bactericidal and bacteriolytic effects.
- (3) The bacteria may be so altered as to agglutinate in the presence of salt.
- (4) The bacteria may be so altered as to be readily ingested by the phagocytes, i. e., Opsonic effect.

Of all these, the Opsonins have the greatest practical importance, for they can be very accurately measured—so registering an increase or reduction in in the opsonic power of the blood. Infection and a lowered index go hand in in hand.

The actual formation of the opsonins probably occurs in the muscle tissues and passes thence into the blood. This is confirmed by the fact that many cases of tubercular ulceration do extremely well when the tuberculin is injected in a concentric manner around the area of ulceration. All secretions and exudations appear to contain a certain amount of opsonins. Lawson found that it is contained in quite appreciable amounts in sweat and more so still in urine and that it appears in inverse ratio to the amount in the blood-that is, that the excretion is greatest during the negative phase.

I pointed out to you that every bacterial vaccine is derived from the corresponding bacterial culture; such vaccines need not, as assumed by Pasteur, consist of living cultures; it is now an established fact that their vaccinating efficacy is not impaired by sterilization with moderate heat. I would lay especial stress on this fact in view of popular misconception, especially as regards tuberculin.

What is our proper line of policy, taking for instance that the bacterial invasion is localized?

The localization, and so restriction, of a bacterial invasion may always be taken as an indication of a relatively high grade of resistance on the part of the infected organism. First and foremost we must try by increasing the amount of the specific protective substances in the blood to forestall any dissemination of the bacteria by the channel of the blood stream. That is our first careto keep the infection localized. effect being successful, we must try to inhibit the growth and if possible to encompass the destruction of the bacteria in the local nidus of infection by leading through that nidus a continuous stream of lymph, rich in protective substances. You will realize that the protective substances are continuously being withdrawn from that lymph as it comes in contact within the infected tissues with the invading bacteria. A. Wright and Capt. Douglas have shown that the stagnant lymph in an ordinary abscess contains hardly a trace of anti-bacterial substances and that the evacuation of the contents of an abscess and the application of fomentations effect a douching of the infected tissues by a lymph as rich in protective substances as that of the circulating blood. Still more impressive were the results shown by them in tubercular peritonitis. The lymph contained in the peritoneum was five times poorer in protective substances than the patient's blood and we can now explain the advantage which is so often obtained in tubercular peritonitis from the evacuation of the ascitic fluid as being due to the replacement of the old and stagnant lymph by the transudation of new and potent lymph from the blood vessels into the cavity; every day that the amount of protective substances in the patient's blood stand higher than in his untreated state counts as a period of progress, there is then one postulate following what has gone before to this which is evident, viz.: that there shall be no stagnation of lymph, for then the protective substances in the blood cease to come into contact with the bacteria in the foci of infection. A practical point of great importance hangs naturally on this in all cases of vaccination; it is not sufficient to inoculate the correct vaccine, but the seat of infection must be also watched lest stagnation occur there; this can often be averted by hot fomentations and massage. Probably the various Light cures and Bier's method owe much of their efficacy and success to their power of improving local circulation and so bringing fresh lymph charged with the protective substances elaborated in the organism into direct contact with the infected area. It is for this reason that citric acid is such a help in this treatment; it tends to increase the fluidity of the blood and should be given during the inoculations. The faith that some place in lemons as of distinct benefit in tuberculosis thus has some foundation in fact.

And now, fellow workers, the dry bones of fact must be clothed with the mantel of achievement and I come to the part of this paper which I think will interest you most. To what practical ends has all this work been put? How far has it brought hope and comfort to the sufferers? How far justified the high hopes raised in its inception, for if it has we, too, must march in the vanguard. The experience of the east shall minister to the west and if I have gauged the spirit of scientific progress and high ideals flourishing here amongst us, it will be indeed a labor of love on my part to bring the results before you, for we are all seekers after truth.

There, is a universal consensus of opinion that the best possible results are only obtainable when organisms, isolated from the patient's own lesion are employed in the manufacture of the vaccine. There are, however, cases which, from their very seriousness, call for immediate display of a stock vac-

cine in which the loss of a few days would be fatal, owing to the acuteness and destruction in the lesion. A good example of this is seen in gonorrheal conjunctivitis of the adult; here prompt injection of a stock vaccine is absolutely necessary. I have seen cases so severe that total destruction of the sight was inevitable in two or three days, thereby completely held in check, and save for the destruction which had already occurred, cured within a week. Again, in tubercular affections the isolation of the organism is so difficult and tedious that the resultant loss of time would fail to compensate for the advantages obtained; and once more, in such cases as chronic gleets, the gonococcus may be visible in smears of the urethral discharge and yet despite the utmost care in taking the cultures, it may prove impossible to isolate the gonococcus from the contaminating organisms.

In no department of medicine have the vaccines found such an important field as in disease due to pyogenic organisms; one and all they come under its absolute control. The two most common organisms are staphylococcus albus and aureus, found as they are to be the cause of inflammatory and suppurative processes all over the body. Amongst the acute forms of infection due to them may be instanced suppurative periostitis and osteomylitis, ulcerative endocarditis, pleurisy, peritonitis and meningitis, carbuncle, furuncle, endometritis and pyaemic conditions and its chronic manifestations, such as acne, ulcers and sycosis. They may also infect secondarily, cases due to tubercle, bacillus coli communis and bacillus typhosus. index, in these cases, is persistently low. I have seen it as low as .2.

These organisms are very easy to deal with. Isolation presents no difficulty and response to inoculation is very marked, the negative phase being marked by a fresh crop of suppurative foci which invariably abort in a .few days. I have had under my own care here many cases of acne, some complicated with obstinate ferunculosis which have under Bacterines without exception cleared up with happiest results to the patient's comfort. One word of warning-the best results will only be observed under Homologous Bacterines. I know it is stated by some workers that the Opsonic Index can be dispensed with in this class of case; perchance neglect to take it would be less harmful than in some of the other more serious bacterial invasions, but it is work bereft of the pleasure exact science brings her votaries. Further injections may be made too frequently without this guide, the negative phase, as witnessed by a fresh crop of pustules, lasting often 3 or 4 days; another injection given then would infallibly superimpose another negative phase on that, and so our patient does not get a prolonged positive phase with its healing power-the acme to be aimed for.

I cannot refrain from quoting you the words of Dr. Ochsner of Chicago, for they exactly represent what our mental attitude to this great work should be. He is speaking of a case of acne in which the necessity of the Opsonic Index was clearly shown and says "I for one am not willing to use the Wright Vaccination treatment without the Opsonic control and for the present, at least, am compelled to condemn such use unhesitatingly, because, so far as I know, there is no other way of telling whether the dose employed is going to be beneficial or harmful, and above all things we should be extremely cautious not to do anything which can be of serious harm to the patient and which may bring discredit upon this new and valuable therapeutic method."

As a rule, acne with furunculosis is due to staphylococcus aureus. Even the most persistent attacks will yield. A patient of my own, a sufferer for 20

years, had had the best advice Europe and America could give her—everything had been tried. A first culture gave pure S. Aureus and the Bacterine made produced a general improvement of the condition, but some pustules persistently remained, her index to S. Aureus being 1.3. Another culture was made giving S. Albus; a fresh vaccine was prepared and complete recovery resulted.

Just recently I have successfully isolated the acne Bacillus of Sabourand and Gilchrist from a comedone. It is an easy organism to grow but extremely difficult to prepare the vaccine from, owing to its greaat sporing powers. This case cleared rapidly under its use, although staphylococcal injections gave little improvement previously.

The appearance of a second crop is a signal for a fresh injection. Sometimes a case remains obdurate and in that event it is better to desist for a few weeks, prepare a fresh vaccine and begin again. When staphylococci complicate a tubercular infection such as a psoas abscess, joint and bone disease, an injection will prove of the utmost assistance to the surgeon.

Western, in a recent paper detailing the results of the inoculation department at the largest London hospital, says: "A large number of cases of acne have been under treatment and without exception have shown a very striking improvement. Those cases in which pus formation was a marked feature cease after one or two injections to form pus. In furunculosis nine cases are reported; a complete and rapid cure was recorded in each case. He says, without exception all our cases of carbuncle have been those which in spite of repeated incisions, fomentations and application of pure carbolic acid, have shown no adequate attempt at repair or healing. These cases we have found invariably to make a rapid recovery when the protective mechanism is called into play by the inoculation of a staphylococcus vaccine.

Streptococci, like staphylococci, cause inflammation and suppuration in all parts of the body. Most successful results have been gained in treatment of such diverse infections as erysipelas, empyema, secondary joint infections, infective endocarditis and septicaemia.

Sir J. Barr has published a most interesting case of complete recovery from an apparently hopeless case of septic endocarditis. Just lately I have had 3 highly successful cases of infection, one of which I brought before you and the others I hope to shortly.

It is a case of a young girl of 18 with acute cellulitis of her arm from a finger prick, involving axilla, elbow and wrist joints. Temperature 105.2; examination of blood gave Streptococci and pus from wrist gave same organism. From the blood growth a vaccine was made, the control of fever and amelioration of symptoms being very marked immediately after its use. The Index was used continuously and was an infallible guide. Once its use was dispensed with for five days and a very acute exacertation was the result: the infection was most virulent, but today that patient, after five weeks illness, has recovered entirely, with perfect use of all her joints and none of the disfigurement operative interference would have occasioned. I may mention that Bier's method was used for the last week, being a very distinct help in the final absorption of pus from the wrist.

I have seen in conjunction with Dr. Edwards a case of acute Erysipelas of head and neck, which under an Homologous Streptococcal Vaccine recovered completely in five days, the temperature on afternoon of initial injection being 105. The view that streptococci are intimately connected with the complications of scarlet fever has steadily grown in favor.

The pneumococcus causes a great va-

riety of suppurative conditions amongst which are pneumonia, pleurisy, pericarditis, endocarditis, peritonitis, empyema, otitis, meningitis, conjunctivitis, arthritis, periostitis, nephritis, metritis, pyosalpinx, abscesses and pyaemia. glance at this formidable list will give you the measure and almost limitless application of vaccine therapy. At the same time it is an easy organism to isolate, but there is one very practical point connected with the preparation of this vaccine; so rapidly does this organism lose its virulence and therefore its value for the preparation of a vaccine, that even in four or five days after isolation from an animal's body, its pathogenicity is greatly diminished. It is therefore of the utmost importance in a case due to this organism that a first subculture should be employed in preparing the vaccine. This point was well illustrated by a case of my own here. It was one of otitis—a discharge of six years standing. The first vaccine made caused little or no improvement, a rapid and complete recovery following the use of a first subculture. Western, at the London Hospital, reports two interesting cases of persistent sinus, following the operation for the evacuation of an empyema. In the first case there had been a discharging sinus for four months since the date of resection of the rib; both pneumococcus and staphylococcus aureus were isolated from the pus. The opsonic index of the former was .7, while to the latter it was I, clearly indicating the organism against which the blood was deficient in protecting substances. A clearer case of the usefulness of the opsonic index could not be gathered, and mark the sequence. A vaccine was prepared from the pneumococcus culture and inoculation commenced. Three weeks after the first inoculation, the sinus had healed. In the second case there had been a sinus for two months. The same line of treatment was followed with the re-

sult that the sinus healed perfectly in two weeks. I hope to bring before you more fully, in conjunction with Drs. Ross Moore and Kelsey, a case of extreme interest due to Friedlander's pneumobacillus. I think there is no doubt the disease started eight years ago in the mastoid and then spread along the meninges to the vertex where abscesses open. From time to time several operations have been undertaken, but the discharge from the ear and a number of sinuses at the back of the neck have persisted ever since with increasing emaciation. The organism was isolated, a vaccine prepared and after two months' treatment, without going into details, the patient's present condition is as follows: All discharge from the ear has stopped; sinuses show capillary growth in all directions with healthy granulations, where before they showed no sign of repair; discharge has practically ceased from many fistulae which before discharged profusely. The patient is steadily gaining weight; last week this amounted to three pounds in a week-her index to this organism being .43 has risen to 1.6. This case, I think, gives us immense encouragement, as it speaks to us all in no uncertain voice.

Pneumonia, too, has largely lost its You are all familiar with the high fever crisis and slow recovery following the cases that resolve. opsonic index to pneumococci in this disease teaches us that during the rising temperature the index is very much below normal (the clinical feature of the negative phase) that at the crisis it suddenly leaps upward in token that the great strategist, Nature, has completed her plans for the final phagocytic onslaught which is to annihilate the pneumococci; and failure of the index to rise thus at the crisis is a matter of very grave import, usually foreshadowing death. McDonald, Coleman and Wright have reported cases in England, and

many American cases stand on record. Dr. Edwards and I have just recently. treated a case of acute pneumonia (which seemed hopeless) by inoculation, on the fourth day with astonishing success. Dr. Edwards will bring this case fully to your notice himself. Coleman reports eleven days after the second injection the patient was in excellent health and for six weeks subsequently the index was slightly over normal. Our experience in the previous case was identical. Time does not permit me to deal with the wonderful number of successful cases due to this organism reported from all points of the compass, but they are a revelation; I can see no limit to this work. The gonococcus has an equally large range as the pneumococcus, being responsible as it is for urethritis, prostatitis, cystitis, epididymitis and orchitis, endometritis, salpingitis, peritonitis, conjunctivitis, endocarditis, arthritis, even pleurisy and septicaemia. In no class of cases is the use of the index in diagnosis so apparent; in chronic cases it is very low-even .3, whereas in acute cases it is unusually high—even 2.5. Every genitourinary surgeon and obstetrician is familiar with the great difficulty of deciding whether a case is gonorrheal or not (where the history of an acute attack is not obtainable), as to whether an old gonorrheal infection has disappeared. The difficulty of advising as to the safety or otherwise of marriage in these cases is very considerable. In deciding whether there are any latent gonococci encapsuled in the numerous urethral crypts, the index is invaluable.

Gonococcal infection in the female is equally amenable to treatment on the same line. There is one point connected with female cases, viz.: That the index to any infecting organism falls considerably during the menstrual period and advantage should be taken of this in making the test. The evidence afforded by these chronic cases of urethritis

serves to illustrate very clearly my contention regarding the use of antiseptics in an earlier part of this paper, viz.: that their application produces a weakened mucous surface upon which numerous pathogenic organisms of low virulence flourish and multiply, and in view of the extreme importance of eliminating every chance of the continuance of a gonococcal infection, it is good practice in all cases where the index is on the borderland of normal, to begin the treatment of such cases with injections of a gonococcal vaccine, even though no gonococci be found in the secretion. One surgeon I know in London has made a routine practice to give in every case of acute gonorrhea one or two injections of vaccine. Convalescence has been completed in two or three weeks and secondary complications and backward extensions have failed to appear in any of his cases. Acute gonococcal conjunctivitis in the adult is a condition of extreme gravity. Unless taken in hand early the chances of destruction of sight are very consid-The treatment of gonorrheal arthritis and septicemia has also proved an unqualified success. Despite the researches of Torrey, who holds that the family genococcus is heterogeneous rather than homogenous, the view of its being a definite entity is usually held. It is undoubtedly important to prepare a vaccine from the patient's own organism. In eye cases an injection should be made at once, a diagnosis is established, without waiting to determine the index or prepare a vacciné. The index in localized eye infections-acute or chronic-due to whatever organism, is exceptionally high, nor will this be wondered at for the circulation of that organ is poor and the area of infection small, consequently the toxins formed are absorbed in such small quantities that they act like very small doses of vaccine and tend to raise the index. That the already high index

fails to effect a cure in these cases is due to the same cause-poor blood supply and poor lymph flow. As in the case of tubercle it is particularly bad practice to inject without ascertaining the index previously. With the one exception mentioned of acute eye infection, frequency of injection must be entirely controlled by determination of the Another peculiarity about this index. organism is the marked improvement of clinical features during the negative phase. Increased discharge often occurs during the first two or three days, but then rapidly diminishes. Notwithstanding the continued negative phase-clinical symptoms are therefore a totally unreliable guide as to the appropriate time for fresh injections. Just lately Allen has published a short resume of three years' study of the treatment by vaccine of nasal and tracheal catarrh and of the accessory air passages which is of immense interest and importance and which is commended to the perusal of those who are interested in this subject. . . .

Chronic nasal catarrh is apparently always due to the bacillus of Friedlander. In cases where the accessories sinuses are not involved, complete cure, both of the chronic and acute attacks, can be confidently relied on; cases even of ten years standing having been completely cured. When, however, extension has taken place to the frontal, ethmoidal, or antral sinus, the case is much more difficult, the surgeon's aid being necessary, and although a complete cure is not always obtainable in these cases, one important result is certainly secured and that is the prevention of acute outbursts of the nasal catarrh.

There is one other pyogenic organism which is especially associated with disease of the abdominal organs and so of more than usual interest. It is more often met with by the surgeon than by the physician—namely, bacillus coli communis, setting up as it does such con-

ditions as peritonitis, cystitis, urethritis, abscesses in and around the kidneys, enteritis, perityphlitis and that very important group of cases—inflammation of the gall bladder and its ducts—occasionally empyema and puerperal fever have been caused by it. . . .

One more point—cases of bacilluria are often due to B. coli com., especially when cystitis complicates a tubercular bladder. In these cases, little progress is made under injections of T. R. alone, and upon attention being paid to the secondary infection, marked improvement is at once noticeable. The same holds true in the treatment of tuberculous kidneys.

The complete failure of various varieties of anti-meningococcic sera to favorably influence the course of the disease in the epidemics of cerebro-spinal meningitis at Belfast and Glasgow in 1906 turned at once the attention of many workers to the use of the opsonic index in these cases and with most encouraging results. . . .

And now I come to the one organism you will have expected to hear most about-because it is ever with us-tubercle bacillus. I have left it very purposely to the last for two reasons: first, the work on it is so immense and important that I could not with usefulness deal with it in a paper already so long that I feel I have made demands on your patience; and second, we have an enthusiast amongst us-our late president, Dr. F. M. Pottinger, who is an acknowledged authority on the subject, not only here but in the far East. I have been privileged to see the proofsheets of the book he is publishing on phthisis, and we all owe him a debt for the clear, convincing way in which he has reviewed the work done and placed the advantages under hard and fast scientific lines of the tubercular vaccine treatment in pulmonary phthisis. I propose to only refer in passing to the general infection, confining myself to the

localized infections due to tubercle bacillus. There is one great drawback to vaccine therapy in the case of this organism-namely, the difficulty of making a culture of the patient's actual organism, taking, as it does, two months to grow, there would be a serious loss of valuable time before treatment could be commenced so that we use stock tuberculin, Koch's T. R. being the one usually injected, at all events, to begin with; but I am convinced that better results will be obtained if subsequent treatment is continued with tuberculin prepared from a culture of the patient's own organism. This was very marked in a case of my own in which this procedure has been adopted. The great relative frequency of localized tuberculous infections is well shown in Western's report of the inoculation department of the London Hospital-out of 250 cases dealt with in two years, 200 have come under this heading. perhaps also indicates the inadequacy of the methods that have hitherto been at our disposal for combatting this type of infection. The tubercle bacillus may gain a footing in the body in various wavs:

- (1) By direct infection of the skin or mucous membrane.
- (2) By absorption through mucous membranes without formation of any lesion in those membranes followed by arrest in a lymph gland where subsequent multiplication may take place and give rise to a localized tuberculous focus.
- (3) By various channels they may reach the blood stream and so form tuberculous foci in the various tissues of the body. . . .

Under the first heading the most important and at the same time commonest affection is lupus in all its varieties. Bullock, in a series of 150 cases, shows that the opsonic index in these cases shows great variations from the normal, ranging from .25 to 1.4. He

points out that with few exceptions where the opsonic index is well below the normal limit, treatment by X-ray or finsen light has little power to stamp out the disease and he concludes by saving: "It seems not at all improbable that in addition to the tissue reaction, an important role in the cure of lupus by finsen light is played by the blood determination, that is the congestion and exudation which occurs after exposure." Western's reports in the main agree with Bullock's and the success of tuberculin, combined with Finsen light treatment, is convincing in the extreme. One practical point must not be overlooked-those cases in which there is much ulceration improve most rapidly-this is probably due to the fact that they are, especially if there is much discharge, continually flushing their lesions with blood fluid. If, therefore, we can insure that this fluid is rich in anti-bacterial bodies, we shall obtain a rapid and corresponding improvement. On the other hand, in the case of dry lupus, the bacterial focus is localized in a tissue, the circulation of which is poor, and it is in these cases especially that the Finsen light is of such paramount assistance.

The treatment of tuberculous infection of the mucous membranes of the nose, larvnx and pharvnx show very marked improvement under tuberculin, especially the chronic cases. The second type of infection includes tuberculous lymphatic channels and glands and it has been in this field that Sir A. G. Wright has won some of his most brilliant successes. Western reports 30 cases of these, 8 had not broken down previously to coming under vaccine treatment; 4 were instances of recurrence after one or more operations for removal. These 8 cases have entirely cleared up. The remaining 22 included both those which were discharging by sinuses and also those which, although broken down, had not burst through the

skin; 8 of these have entirely cleared up—the others show great improvement.

Under the third heading fall tuberculous bones, joints and synovial sheaths of the epididymus and bladder. Western, in his report, deals with 15 cases of tubercular bone disease. Of these, 7, including dactylitis, sternum, rib, mastoid, and acetabulum are cured. This last case was particularly interesting being one in which amputation at the hip had been done for disease of the joint, but was followed by persisting sinuses leading down to the diseased bone, the condition having lasted in all about six years. After six months treatment the sinuses closed and the patient has remained well ever since-a period of fifteen months from date of this report; 17 cases of tuberculous disease of joints and synovial sheaths are reported-of these 9 are either cured, or show great improvement; 15 cases of tubercular epididymitis are reported—6 are cured, the rest, with the exception of I, are showing steady improvement.

In conclusion, I cannot do better than quote you Dr. Western's summary. He says: "We have found that in cases of lupus, both of the dry and ulcerated varieties, but particularly in the latter, treatment by inoculation has proved a very valuable adjunct to such other measures as procure a local hyperaemia; that out of enlarged tubercular glands only 4 failed to show improvement, whilst 16 were completely cured, 8 of which, when sent to us, were discharging from contaminating sinuses: that in the case of chronic tuberculous arthritis and in such topographically diverse affections as erythema, induratum and tuberculous epididymitis, the results have been most uniformly satisfactory. That in affections of a nontuberculous origin—those such as acne generalized furunculosis and obstinate carbuncle, which have been treated with their appropriate vaccines, have cleared up with remarkable rapidity; while our narrower experience of pneumococcal and bacillus coli infections are at any rate sufficiently significant to fore-shadow the wider fields that would now seem to be opening before a line of treatment that bids fair at no distant period to rank among the most potent weapons of future therapeutics."

Fellow-workers, I have stated the case—with you and the future lies the verdict. To my mind it is full of magnificent promise.

Security Building.

DISCUSSION.

DR. WM. A. EDWARDS:—I have been asked to say a few words in discussing this very excellent paper that is such a clear exposition of our present knowledge of opsonins and bacterial vaccines, or, as it seems better to me, "bacterins."

seems better to me, "bacterins."

Three years ago I was asked to present the subject of pneumonia to this Society with the details of the ward work of Osler and myself, during the time that I was associated with him. It was then said that our experience was that the mortality of pneumonia, under any and all plans of treatment, was between 10 and 16 per cent. and I doubted if it would ever be very much lower, although the reservation was made that a healthy man is rarely if ever killed by pneumonia.

Here I stand again tonight with a complete reversal of all that was said that evening three years ago, and the change in our outlook is due to the epoch making work of Wright, Douglas, Ross and others.

I have now had a sufficient number of cases of various diseases in which the opsonic index and the bacterins have been of such signal success that I feel warranted in speaking most strongly in their behalf and stating that, to my mind, this is the first real advance in clinical medicine since James and since the antitoxins of diphtheria. It is akin to the advances in surgery due to aseptic knowledge and it is of no less importance. For years many of us have recognized that we were without an internal antiseptic, that the so-called intestinal antiseptics myths and will-o'-the-wisps. More recently we have found that external antiseptics were not only useless but harmful and the operating rooms are no longer encumbered with useless paraphernalia to carry out a harmful procedure. Wright has shown us why, and Martyn this evening has clearly presented the reason of the hopelessness and uselessness and harmfulness of all so-called antiseptics both internal and external. But

fortunately now we can turn to Nature's own methods, that is the bacterins.

All of us who have practiced for many years, some like myself for a good many, have lived through the various newer methods that from time to time have had their day and passed on into oblivion and medical curiosities. But, in the subject under discussion this evening we are dealing with demonstrated facts. Facts that all of you can readily demonstrate to your own satisfaction if you will take but the time and patience to familiarize yourself with methods and technique. Many of us suffered keen disappointment eighteen years ago in Koch's first attempt (1890) to cure tuberculosis by tuberculin, but we have lived to see a realization of this great desideratum, thanks to the opsonins. We now know, beyond peradventure, that those who become the subject of bacterial invasion have a blood deficient in essential protective substances and we also know that by the injection of corresponding bacterins the blood content in protective substances can be increased. This we know, it is not theory but fact. I have seen it too often to doubt its existence. We also know that the stimulus is specific to the bacterial protoplasm involved. That is a staphylococal bacterine injected will stimulate the phagocyte to produce a protective substance specific to that organism alone. This in a word is the kernel in a nut, it is the essential knowledge of opsonins and bacterins, but, of course, bacterins, cannot accomplish the impossible; the patient must still have reserve forces that can be called into action, therefore we must make our cultures early, or immedi-Blood cultures, too, should always be made in case of general bacterine invasion, this after or at once, the organism that is causative and also the material for antigenous or homologus vaccine. Dr. Martyn has also made very clear the so-called negative phase, without a full knowledge of which bacterins are dangerous weapons which may prove fatal to the one that we wish to aid. It was the absence of this knowledge that caused Koch's efforts in 1890 to be disastrous failures. Fortunately the negative phases, or the time during which the blood has a diminished protective content, can be accurately measured by the opsonic index, which also tells us of the commencement of the positive stage and of its duration. It is this that makes the method difficult of application, time consuming, expensive, and in the smaller towns, without competent bacteriologists, prohibitive. The administration of bacterins without full knowledwge of opsonins is too dangerous to be endorsed, if the latter cannot be obtained the former had better be omitted. One or two medical men who have called me to their cases at once ask if the negative phase cannot be recognized by the clinical symptoms, and we must answer that if it is recognized under these circumstances its severity is of such type that harm has been done to the patient by excessive doses of bacterins. No, there is no royal road to travel here, but the slow beaten path by way of the opsonic index must be taken. It is time consuming and expensive but it is absolutely essential.

We must remember that infection and low index are synonymous terms, but we must also remember not to be overzealous and give the bacterins too soon again to prolong the negative stage to a disastrous extent.

I am not at all sure of the practical efficacy of citric acid. I have seen many cases do well without it, theoretically of course its administration is fully warranted. There is no question that the best results are obtained by homologous bacterins, but this is not always possible, as we have seen good results when the organisms used in the vaccines were not from the patient's own blood. Time is such an important element that it is not always wise to wait for the organism grown from our culture, but better to first use a stock vaccine from one's own laboratory or some of the commercial vaccines, or even the commercial sera.

Of course in using the commercial vaccines we run the chance of injecting a different family from that which infects the patient and in the use of the sera we cannot hope to increase the opsonic index or "prepare the banquet."

A very valuable feature of this work is its diagnostic use in conditions other than tuberculosis, notably gonorrhoea, in which it is possible to make a positive diagnosis in those cases' that are called latent or larval, in which the most expert examinations fail to give us an ocular demonstration of the cocci. The indicies in these cases will be low to gonococci, and this evidence is final and conclusive.

A great deal has been said this evening in regard to the brilliant results of bacterins. Now let us for a moment refer to the less brilliant side of the picture. The most serious limitation to the entire success of the procedure, in the acute cases, the very ones that we need it most, is the lack of knowledge of the variety of the infecting organism, the time required to gain this knowledge, and the time again required to grow the organisms for an homologous vaccine.

My experience so far covers 2 pneumonias, both pure pure pneumonium infections; 1 scarlatina, 1 tuberculosis of kidney, 1 pulmonary tuberculosis with rectal fistula, due to bacillus coli communis; 1 cerebro-spinal meningitis, due to diplococcus intercellularis menongitidis, 1 appendicitis due to bacillus coli communis, 1 appendicitis due to streptococcus and staphyloccus, 1 acute coryza micrococcus catahrralis, 1 cystitis due to bacillus coli communis.



C., CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE,
Established in 1886 by
WALTER LINDLEY, M.D., LL.D., Editor and Publisher. A MEDICAL, CLIMATOLOGICAL

This journal endeavors to mirror the progress of the profession of California. Arizona and New Mexico.

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Subscription Price, per annum, \$1.00.

1414 South Hope Street, Los Angeles, California.

EDITORIAL

PERNICIOUS ANAEMIA.

That pernicious anaemia invariably is accompanied by a marked increase in the iron content of the liver and spleen, augmented production of uroblin, frequently by icterus and sometimes by haemoglobinaemia and haemoglobinuria, many years ago led to the belief that extensive erythrocytolysis is taking place.

These observations were followed by attempts to produce experimentally on dogs and apes a blood picture of pernicious anaemia by employing a haemolytic agent such as toluylendiamin. So similar was the blood picture obtained in this way to that of pernicious anaemia that a conclusion seemed irresistible. namely, pernicious anaemia is the result of a haemolytic agent.

The origin of this red cell-dissolving substance has been the subject of much

study. Since many cases of pernicious anaemia are preceded or accompanied by digestive derangements Hunter volunteered his belief that the haemolytic agent is formed in the alimentary tract. but the absence of conclusive evidence supporting his statement prevented an acceptance of this hypothesis at that time.

The contents of the intestinal canal in pernicious anaemia have been studied recently by Gravitz and Külbs in Germany and Herter in this country. Külbs extracted the faeces in many cases of pernicious anaemia with physiological salt solution and found in every case an extract able to dissolve red cells in vitro, while a similar extract of normal faeces always failed to show this haemolytic action.

A study of the intestinal flora in pernicious anaemia seems to show in

every instance B. aerogenes capsulatus or B. putrificus, both obligate anaerobes which produce a powerful haemolytic agent. Dr. Herter of New York expresses himself as convinced that these organisms in the colon are responsible for many cases of pernicious anaemia.

If these putrefactive anaerobes produce the erythrocytolysin responsible for the haemolysis of pernicious anaemia, it should be possible to ameliorate anaemia by eliminating these organisms from the colon. Two methods have been employed to gain this end, firstly, high intestinal lavage and, secondly, replacing the harmful organisms B. aerogenes capsulatus and B. putrificus by feeding harmless organisms of the lactic acid family, namely, B. acidophilus and B. lactis aerogenes. This treatment in the hands of Gravitz and Herter and others has given most gratifying results. After a few days, marked improvement in the haemoglobin takes place. Megaloblastic and other pathological forms of red cells are said to disappear promptly.

MORE OLIVES-LESS PORK.

The taste for the ripe olive and for olive oil is a somewhat cultivated one for the person from the North, but in Southern California and Arizona practically every child has a hearty appetite for the ripe black fruit.

This taste should be encouraged.

The ripe black olive is eaten in every Southern California home. Two dozen clives and a piece of bread make a delicious, healthful luncheon for our school children. In the country near Los Angeles the roads for miles and miles are lined with olive trees, thus serving the triple purpose of shade, fruit

and ornamental trees. The development throughout the United States of a taste for the ripe olive is good missionary work. The olive in the old world is as ancient as history. In the province of Achaia, in the northwest of Peloponnesus, Greece, the crop of olives for 1907 aggregated 850,000 pounds; in the district of Pharron, in the north of the Peloponnesus 282,685 pounds.

The olives exported from the Peloponnesus are black in color and are sent pickled in brine. The finest variety is grown to the north of the Peloponnesus, on the plain about Amplisso, on the north coast of the Gulf of Corinth. About 90 per cent. of the crop of this district is exported to the United States, largely through Patras, the chief port of the Poleponnesus.

Corfu, a large island lying northwest of Greece, also exports considerable olive oil, mostly to Russia, England and France.

In Corfu, owing to the great age and large size of the trees, the olives are allowed to ripen and fall to the ground and then gathered. In the Peloponnesus, on the other hand, the harvesting method usually employed is to beat the trees with long wooden poles, the severe shaking causing the olives to fall to the ground. The quality of the oil resulting from the former method is somewhat the superior.

Today many olives and much olive oil are being imported to the United States, but the time is approaching when they will be among America's exports. Every physician should stimulate and promote this branch of horticulture. The olive and its product—olive oil—are ideal nutrients and their extensive use will have good effect on both mind and body.

EDITORIAL NOTES

18 R. A. Anton of Tueson, has located in Bisbee, Ariz.

Dr. Norman Bridge of Los Angeles has been spending a few weeks in Mexten.

The Surgeon-General of the Army needs more young physicians. Address him, Washington, D. C.

Dr. J. M. Holden of Long Beach, who has been suffering from rheumatism, is convalescing.

Dr. John Elmer Adams of Flagstaff, Ariz., recently spent a few days in Los Angeles.

Dr. C. C. Stephenson of Little Rock, Ark., has been taking his winter vacation in Los Angeles.

Dr. Jennie G. Ghrist of Ames, Iowa, took her winter vacation in Los Angeles.

Pasadena is having trouble with ininospitable neighbors over a suburban health camp for the tuberculous.

Dr. Devereaux, Surgeon U. S. A., retired, Washington, D. C., is spending few months in San Diego.

"The Principles Underlying the Treatment of Tuberculosis" is the title of a reprint by F. M. Pottenger, A.M., M.D.

Dr. Francis Marion Collier, eye, ear, nose and throat, now has his offices in the Lissner Building. Los Angeles.

Some European philosophers propose to eliminate the dangers of over-population by repealing the vaccination laws.

President David Starr Jordan has announced that Cooper Medical College will soon become a department of Stanford University.

Dr. George A. King, College of Medicine of the University of Southern California, class of 1906, is practicing in Randsburg, Cal.

Dr. C. E. Yount recently made an interesting talk on "Medical Supervision

of the Public Schools" before the Monday Club of Prescott, Ariz

T. D. Crothers, M.D., Hartford, Ct., would like the names and addresses of all physicians who have written on the Alcoholic Problem.

Dr. Harry D. Jenkins, U. S. C., class of 1901, has been appointed Assistant Surgeon at the Soldiers' Home. Santa Monica.

Dr. William E. McCoy of Los Angeles was recently elected a member of the Los Angeles County Medical Society.

Dr. O. W. Kanlde of Upland has been appointed Deputy Health Officer of San Bernardino for Upland and Ontario.

Dr. Franklin W. Hays, of Indianapodis, graduate of the Indiana Medical College, class of 1880, thed in Las Angeles, March 25

Guadalupe, Cal. 1- without a physician. For particulars, write to the editor of The Guadalupe Moon. Why he gave it such a name we can't explain.

Dr. Ray Ferguson, superintendent of the Arizona Insane Asylum, who was seriously injured by a patient several months ago, has returned to his post entirely recovered.

Dr. Clarence H. Woods, Jefferson, Class 1896, formerly County Physician and President County Medical Society, Reno, Nev., has located at 316 Cedar avenue, Long Beach, Cal.

Dr. Charles Goodrich Shipman, of Ely. Minn., has been spending a few weeks' vacation in Los Angeles. The doctor belonged to the class of 1881, Rush Medical.

Dr. E. W. Hanlon, who limits his practice to diseases of the digestive system, has his offices in the Lissner Building, 524 South Spring street, Los Angeles.

The Texas Medical Journal says, editorially, "There is not a 14-year-old girl in Texas who does not know what "Tansy Wafers' stand for. Think of it! Such a situation is deplorable."

Dr. John C. Gleason of Corona, Cal., age 63, died March 28, after a few hours' illness. Dr. Gleason was a graduate of the Medical Department of the University of Iowa, class of 1883, and had resided in Corona twenty-one years.

We are afraid the Health Officer of Santa Ana was too officious when he arrested Dr. J. R. Medlock, Dean of the medical profession of Orange county, for not reporting a case of chicken pox. Dr. Medlock was fined \$20.

Dr. Hazen L. Avery of Los Angeles, A.B. Pomona, class of 1900, M.D. Rush, class of 1904, died March 23. He leaves a widow, nee Miss Wigton of Pomona, to whom he had been married one year, and father and mother.

The Abbott Alkaloidal Company gets a thorough write up in the *Journal of the A. M. A.*, of March 14, 1908. We commend this article to every physician in the United States. It is written in a plain, cool judicial spirit.

Dr. W. A. Hyde died at his residence, East Hollywood, near Los Angeles, on March 12. He was born in Martinsburg, N. Y., April 14, 1829. Dr. Hyde was a veteran of the War of the Rebellion, having served as surgeon of the Twenty-first Iowa.

We understand that the Barlow Medical Library has not a satisfactory reference department on diseases of the eye, ear, nose and throat We trust that the specialists of Los Angeles and Pasadena will take action and see that this department is made complete.

The Idyllwild Hotel will open as usual June 15. Furnished cottages and tents for housekeeping are for rent the year round. There will be two new roads to Idyllwild this season. Tickets should be purchased over the Santa Fe as heretofore.

Our associate, Dr. George H. Kress, representing the College of Medicine of the University of Southern California, writes from Chicago:

"I will remain here until April 13 and 14, at which time the Council on Medical Education of the A. M. A. will hold its meeting.

"The meeting of the Association of American Medical Colleges resulted in no radical changes. The Association went on record as being in favor of all efforts to increase medical standards, but did not adopt the additional year of work as an entrance requirement.

"So that the standard of the California State Medical Law, for the time being at any rate, remains the same as at present, viz, the full four-year high school course.

"Steps were taken to have the next meeting consider the matter of minimum equipment and of minimum courses in the studies of the first two years. This scheme should lead to greater uniformity and better results in medical curricula."

The California Medical Journal (San Francisco) and The Los Angeles Journal of Eclectic Medicine have consolidated and the new journal, under the name of The California Eclectic Medical Journal, will be published in Los Angeles.

Dr. Guy Cochran of Los Angeles, who had violated the automobile speed law, was discharged by a police judge because the testimony showed that it was a stork call. The doctor appreciates more than ever that Rooseveltian motto: "Welcome little stranger."

Dr. Carrie Hitchcock Edwards, formerly of San Francisco, has located at 911 Fifth street, San Diego. Dr. Edwards graduated from the Michigan College of Medicine and Surgery, class of 1898, and has done post-graduate work on the eye and ear in Europe and America.

Mr. Julian Kutnow, of London and New York, has been visiting the medical profession of Los Angeles. While Mr. Kutnow is one of the firm of Kutnow Brothers, and he is a representative of that house, yet his appearance in Los Angeles is more like the social call of an old friend.

The cinematograph in medicine is advocated by Dr. H. Campbell Thompson. He has successfully used it for recording and illustrating the movements of patients suffering from nervous diseases. The photographs, which were taken at the rate of 16 per second, clearly show the nervous movements, and are used for the instruction of students.

According to Dr. I. Bulstrode, (J. A. M. A.), the death rate from tuberculosis in England and Wales in 1838 was 39.9 for each 10,000 persons, in 1882 it was 18 for each 10,000, and in 1906 the rate was 11.5 per 10,000. This remarkable reduction should be to every medical man an inspiration to renewed effort.

Dr. Dennis James Brannen of Flagstaff, Ariz., died of apoplexy on Wednesday, March 4, in Washington, D. C. He was born in Ottawa, Canada, in 1858, and graduated from the Cincinnati College of Medicine in 1882, and immediately came to Flagstaff and began the practice of medicine. Dr. Brannen was prominent in politics, business and medicine.

Rats, considered by the sanitarian, is a carrier of the plague, but the economist should also remember the great loss these rodents cause the farmer. In Germany and Great Britain alone it is estimated damage to the extent of \$150,000,000 is wrought annually by this pest. Successful use is being made in Europe of a bacteriological preparation known as "Ratin" to destroy rats.

Prescott, Ariz., through the Mayor and City Council, enacted, on March 9, a very thorough ordinance controlling the tuberculous and requiring the registry of all persons suffering from that disease. This ordinance also requires the Health Officer to examine the sputum of all indigent persons suspected of having tuberculosis. There are other very commendable provisions in this new law.

Dr. H. D. Nichols, the surgeon of the Chicago, Rock Island and Pacific and the El Paso and Southwestern railroads, with headquarters at Tucumcari, N. M., has been obliged to go to Hot Springs, Ark., for his health, he having suffered for two months with a severe attack of inflammatory rheumatism. The doctor has been in Alamogordo for some time in the railway hospital there, but found no relief.

Dr. Francis B. Harrington of Boston. in the New York Medical Journal, says he has been undeservedly credited with the introduction of "Harrington's Solution" as this credit belongs to Professor Charles Harrington of the Harvard Medical School. The formula of "Harrington's Solution" is on page 636 of the Southern California Practitioner, December, 1907.

Pottenger's Work on Tuberculosis was reviewed by our associate, Dr. Kress, in the Southern California Practitioner for March, but with a copy of the work before us we must congratulate Dr. Pottinger for his achievement, and the profession for this valuable addition to medical literature. It is a comprehensive, scientific, practical work and will carry light and hope to every intelligent reader.

Opsonic index is a term used to express the relative phagocytic power of the blood. It is found by dividing the average number of bacteria of a given kind which will be taken up by a leucocyte of an individual's blood by the number of bacteria of the same kind, which will be taken up by a leucocyte of the blood of a normal individual. The latter number is found

by taking the average of several observations of normal persons.—J. A. M. A.

The following reprints by Dr. I. A. Abt of Chicago have been received:

- (I.) A Note on the Reducing Power of Urine Following the Administration of Urotropin.
- (2.) Acute Non-Suppurative Encephalitis in Children.
 - (3.) Urinary Infection in Children.
- (4.) The Treatment of Congenital Syphilis in Infancy.
- (5.) Hemorrhage Into the Spinal Meninges.

We have received the following reprints from the author, Dr. Robert C. Coffey, Portland, Or.:

- (1) Remote or Indirect Subperitoneal Drainage in the Extraperitoneal Closure of Persistant Foecal Fistulae.
- (2) The Present Status of the Treatment of Appendicitis: The Family Physician's Responsibility.
- (3) The Principles and Mechanics of Abdominal Drainage.
 - (4) Intestinal Intussusception.

Dr. C. E. Wardell, class of 1907, U. S. C. Medical Department, was married on February 28, 1908, at the home of the bride in Portland, Or., to Miss Ruth E. Arnold. Miss Arnold was head nurse in the California Hospital, Los Angeles, for some time, and only six months ago returned to the North. Dr. Wardell is assistant superintendent at the King County Hospital, at Georgetown, Wash., and is associated with Dr. Rickter in general practice in Seattle. Dr. and Mrs. Wardell will be at home after March 15, at 4407 Maynard avenue, Seattle.

Dr. Harris Garcelon, U. S. C. 1904, has resigned the position of Assistant Health Officer of the city of Los Angeles and been appointed chief assistant to Dr. H. G. Cates, the Southern Pacific Division Surgeon for Southern California. Dr. Hiram B. Tebbetts, U. S. C. 1904, succeeds Dr. Garcelon in the Health Department. Dr. George L.

Hutchinson, who has been Dr. Cates' assistant for several years, has accepted the superintendency of the Emergency Hospital Division, Los Angeles, succeeding Dr. J. B. Cutter who, we understand, will be connected with the Santa Fe Hospital, Los Angeles, taking the place made vacant by the death of Horace B. Wing.

In The Journal of Outdoor Life published at Tradean (Saranac Lake,). N. Y., the March issue contains an interesting article by Dr. George H. Kress of the Southern California Practi-TIONER. The subject is "The Prevention of Tuberculosis." There is also in the same magazine an article by Dr. Philip King Brown of San Francisco on "Outdoor Life in California." Dr. Brown speaks especially of the work of the Barlow Sanatorium, and says: "This was the first real movement in California toward placing the care of patients suffering from tuberculosis on a proper footing."

Dr. Julia D. Merrill of 683 North Robey street, Chicago, announces the Women Alumnae Committee, the Women's Medical Society of the State of Illinois, and the Medical Women's Club. each wish to entertain the women physicians visiting Chicago at the meeting of the American Medical Association next June. At the banquet to be given on June 2 a special feature will be made of the reunions of the Alumnae of the different colleges. The College Club in the Fine Arts Building, 203 Michigan avenue, will be exclusively at the disposal of the medical women during the meeting of the A. M. A., and will afford a place for all to meet, lunch, and visit together.

Mr.—often called "Dr." contrary to his wish—Harry Brook, editor of "The Care of the Body" Department of the Los Angeles Sunday Times Magazine, in noticing the death of von Esmarch, writes most eulogistically of the great teacher and surgeon who was years ago

the medical attendant of Mr. Brook's family. He says: "Friederich von Esmarch received what would be called, even in America, large fees. Yet the poor he treated free. He was a man of imposing personality." He died in Berlin February 23 at the age of 85 years. Every man who graduated in medicine twenty-five to thirty-five years ago had his work on surgery. He leaves a son, Edwin, Professor of Hygiene, University of Gottingen.

The fifty-second annual meeting of the California State Medical Society will be in session in beautiful Coronado from April 21 to April 22, inclusive. All visitors will be delighted and astonished at the substantial growth of San Diego. The panic didn't touch that city. Her banks met all just demands and the city kept right on growing. The annual election of officers will be one of the interesting features. Thirteen years ago Dr. Le Moyne Wills was elected President and gave the profession an excellent administration; five years ago Dr. H. Bert Ellis was elected President, and he was also an able executive. Since that date all presidents of the society have been elected from north of the Tehachepi. We believe it is the intention of many of the Northern delegates to come South with the generous purpose of electing a Southern man as President. This is as it should be.

We are for ALL CALIFORNIA. No sectionalism should be allowed. Let us simply see that our neighbors are treated neighborly and that each portion of the State is from time to time fairly and proportionally represented in the executive chair. It is fair and logical that the presidency should this year be conferred on a Southern man.

With over a half century of honorable history back of it, with our memories stored with the names of many strong, aggressive characters who have passed to their reward but whose ability and loyalty to high professional ideals gave us our organization, the California State Medical Society is now stronger, more

influential than ever before. Let that strength be used in all humility for Good-fellowship and Humanity.

Dr. and Mrs. Walter Jarvis Barlow were dinner hosts Thursday evening, March 26, entertaining members of the Phi Rho Signa fraternity. Cardinal ribbons and jonquils carried out the fraternity colors in the table decorations, and the place cards, adorned with leapvear girls, were embossed with fraternity emblems. Games, music and a smoker followed the dinner. Donald Frick was present as a special Others who attended were Messrs. Carroll N. Bahrenburg, Herbert A. Rosenkranz, Macklin, Will Weber, Caesar Cahen, Ed Cahen, James Holleran, Dick Ronan, MacDonald, Rex Duncan, Ralph Byron, Emmons, Carlton Allen, Charley Nordoff, Frank Kidder, Peterson, Percy Osburn, Werner, Ed Hall, Ralph Herendeen, Lindsay, Harry Huntoon and Vinton Roy Town-

Dr. C. W. Sharples of Seattle, in *Northwest Medicine*, tabulates the record of all applicants before the Washington State Examining Board from 1890 to 1907, inclusive. In this report the Medical Colleges of California have the following record:

	Appli- cants.	Failed.	Per cent of failure
California Medical College		_	
(Eclectic)	9	. 8	88
Cooper Medical College	41	4	9
Hahnemann Medical Col-			
lege of S. F	Ι	I	100
Physicians and Surgeons of			
Š. F	IO	0	0
Physicians and Surgeons of			
Los Angeles	I	I	100
University of California	8	2	25
University of Southern Cal-			
ifornia	8	0	0

Dr. J. F. Kennedy, formerly of Des Moines, has located at 942 Potter Park avenue, Los Angeles. The doctor graduated from the Medical College of the University of New York, class of 1858. He was Assistant Surgeon of U. S.

Regular Army, his commission having the signatures of Abraham Lincoln and Simon Cameron. Dr. Kennedy was Secretary of the Iowa State Board of Health for twenty-two years, and Secretary of the Iowa State Board of Medi-. cal Examiners for twenty-one years. Thus for over two decades it took his signature to make a medical license valid in Iowa, and now we suppose if he desires to practice in California he must go before our board for an examination. After all Dr. Kennedy has done for the Nation, after all his faithful service for the State and for the profession, California should give him an honorary license.

Dr. Joseph B. Tanner, Assistant Police Surgeon of the city of Los Angeles, was drowned off the coast of Santa Cruz Island at 9:15 a.m. Wednesday, April I. He was born in Illinois May 12, 1877. He was a graduate of the Los Angeles High School and received his Medical Degree from the College of Medicine of the University of Southern California, class of 1902. He then practiced for two years in Mexico where he was very successful. From Mexico he went abroad where he spent two years in the hospitals of London and Vienna. On returning to Los Angeles he was appointed Assistant Superintendent of the Los Angeles County Hospital, which position he filled most efficiently until he resigned to accept the position of Assistant Police Surgeon. At the time of his death he was taking a much needed rest and was drowned while launching a boat through the breakers. He was a member of the Nu Signa Nu and was universally respected. His funeral was largely attended and the following physicians acted as honorary pallbearers: Drs. C. W. Cook, S. J. Quint, E. H. Garrett, C. W. Bonynge, Harrie Chamberlain, E. H. Wiley, Harry Wright and T. G. Finley.

Dr. C. F. Taylor, editor of the Medical World, President American Medical

Editors' Association, poet, reformer and financier, has written a poem, "The West Is Calling Me," from which we abstract the following of Southern California:

"Dreams of the south land!
Are they dreams? or are they real?
Were those orange groves,
Rows so straight,
Golden fruit and fragrant blossoms,
Trees so graceful—
Were they real? or was I dreaming?
Geraniums climbing like wild;
Fuchsias growing into trees;
Roses growing helter skelter;
All in an ecstacy of bloom,
And oleander trees almost solid blossom.

Did I dream it all? or Was it waking eyes which beheld? And every day a perfect one, Warmth of sun and refreshing breeze. People go there and forget to return. Why did not I forget?

The west is calling me."

Dr. Oliver John David Hughes of New Rochelle, N. Y., died in his office from cerebral hemorrhage on March 5. He descended from Revolutionary ancestry and was born in Buenos Ayres where his father, John H. Hughes, was representing the United States as resident Minister. He graduated from the Long Island College Hospital, class of 1875, and succeeded the editor of the Southern California Practitioner as interne of the Eastern District (Williamsburg) Hospital, Brooklyn. was thirty-three years ago. We have not seen him since. He was a genial, delightful young man. Dr. Hughes served in the German Army Medical Corps during the Franco-Prussian War, and was decorated by Emperor William I., and also received the Grand Ducal Badish Medical Cross. In 1897 he was appointed United States Consul at Sonnebarg, Germany, and was later Consul-General at Coburg. He was town physician of Meridian, Conn., for four years, member of the health board and member for several years of the board of school visitors of that city.

BOOK REVIEWS

TREATMENT OF INTERNAL DISEASES. For Physicians and Students. By Dr. Norbert Ortner of the University of Vienna, edited by Nathaniel Bowditch Potter, M.D., visiting Physician to the New York City Hospital, to the French Hospital, and to the Hospital for Ruptured and Crippled; Instructor in Medicine, Columbia University. Translated by Frederic H. Bartlett, M.D., from the Fourth German edition. Philadelphia and London, 1908.

This volume of 650 pages is eminently practical. It is just the work for the young practitioner to have at hand. The prescriptions are here. The author deals in exact plain facts, not in generalities. In speaking of the

DIETETIC THERAPY OF VALVULAR DISEASES
OF THE HEART

the author says: In every heart lesion, no matter how perfectly compensated, there are increased demands upon the cardiac muscle. The object of the dietetic therapy is, then (1) to maintain and if possible to increase the strength of the heart muscle, and (2) to avoid anything that might increase the demand upon it. It is clear that the old method of keeping the patient on a low diet could do nothing but harm. On the contrary the food should be as strengthening as possible. It is best given every 2 hours in relatively small amounts in order to avoid the strain on the heart produced by too great distention of the stomach and intestines, which would crowd up the diaphragm and cause hyperameia of the digestive organs, especially the liver, with consequent relatively increased flow of venons blood into the right auricle. Naturally all foods that irritate the heart must be avoided (condiments, vanilla, cinnamon, mace, coffee, tea, alcohol and too hot food). All foods that tend to cause flatuency must also be forbidden, as they dilate the stomach, and so mechanically and reflexly increase the heart's work, as shown by shortness of breath and palpitation. Examples of such foods are sauerkraut, cabbage, black bread, peas, beans, potatoes, and drinks charged with carbon dioxide. Carbon dioxide has the further disadvantage of increasing the peripheral blood pressure, and so adding to the work of the cardiac muscle. The patient should stay in bed until 8 or 9 a.m., having breakfast as early as his inclination directs. For this first breakfast he may have a pint of milk with some bread and perhaps butter. If he dislikes milk (sweet or sour) he may have added to it salt or a little brandy (a liquor glass to a pint of milk), or a very small amount of weak tea or coffee,—better malt or barley coffee. Or he may begin with a smaller quantity of milk and gradually increase the amount. He may have two softboiled eggs or a piece of white meat. The latter is however better reserved for the second breakfast, two or three hours later. This may consist of a cup of bouillon, bread, and a small piece of fowl, chicken, pheasant or partridge, roast veal or veal cutlet, ham, or beef fillet. The mid-day meal should come betweent I and 3 p.m. and should include soup, a little white meat, fish which is not too fat, with vegetables and a light pudding. The vegetables to be preferred are spinach, brussels sprouts, lettuce (stewed), cauliflower, carrots, beets, peas in puree form, and potatoes made into soup, mashed or riced.

Apple-sauce and stewed figs or cherries are good, on account of their laxative effect. Uncooked fruit is less advisable. Supper should come not later than 8 o'clock and should consist of some white meat, bread and butter. As for drinks, Oertel has shown that in cases of simple heart muscle disease, the patient does better with small quantities of liquid food. With insufficient heart activity, not more than 800 to 1000 cubic centi-meters (11/2 to 2 pt.) in 24 hours should be given. Oertel explains the consequent good results by the fact that a diminished fluid intake corresponds to a diminished quantity of blood and hence less work for the heart. Alcohol in general should be forbidden. Beer must be avoided on account of its carbondioxide, and also because it dilates the stomach and has been shown to have an especially injurious effect on the healthy heart muscle. Tobacco is forbidden, as it is likely to cause increased heart activity, irregularity, and intermission and sometimes attacks of augina pectoris. The patient should avoid even remaining in a room full of tobacco smoke, the effect of which is almost as bad as that of smoking itself. "The volume is divided into sections giving the Therapy of Diseases of the Circulatory System, Therapy of Disease of the Genito-Urinary organs, Therapy of Diseases of the Lungs, Therapy of Diseases of the Stomach and Intestines, and through all of these pages prescriptions are numerous and after all these years of therapeutic nihilism or its synonym, Oslerism, they look refreshing and encouraging.

SYPHILIS. A Treatise for Practitioners by Edward L. Keyes, Jr., M.D. D. Appleton & Co., N. Y., 1908.

This is altogether the most complete and valuable treatise upon syphilis written in English. The work represents the conclusions drawn from the experience of the recorded observations of 2500 cases of syphilis occurring in the private practice of the writer, his father and the teacher of his father, Dr. Van Buren.

In the earlier chapters he shows clearly the widespread prevalence of the disease in all countries, the general ignorance which prevails as to its symptoms, the ease with which it may be acquired innocently, and the absolute necessity for common education of the public in order that its prophylaxis may be possible. He accepts without reserve the agency of the spirocheta palida as its active cause producing an infection of the whole man which has as equals for intensity and pertinacity only tuberculosis and leprosy. He

makes the following sarcastic, but as experience in other infectious diseases has well shown, fully justified comment: "Unhappily it is to be foreseen that as spirocheta diagnosis assumes greater prominence in the diagnosis of syphilis the tribe of near pathologists will feel fully competent to pass upon this, the most delicate point in the diagnosis of the most important infective disease that effects mankind. To the cock-sure diagnosis of the hasty practitioner will be added the scientific diagnosis of incompetence."

The work of Metschenikoff, Roux, Neisser and others, in the production of syphilis in monkeys is reviewed and it is pointed out that the most important conclusion derived therefrom is that "Syphilitic secretions cease to be infectious after 12 to 24 hours and much sooner, six hours, when dry and that this probably explains why we do not all get the disease from cigars or table utensils when traveling. Further as a result of these experiments it is shown that the virus of syphilis having been brought in contact with an abrasion on the skin of a non-syphilitic the only measure of prophylaxis against the acquirement of the disease consists of the application of a strong mercurial ointment to the spot of inoculation within an hour.

The question of when may a syphilitic marry is answered in what seems to the writer to be a reasonable way "The marriage of a syphilitic is permissable only after five years, during the last two of which he has been without symptoms and without treatments." The danger of marital infection is 12 to 1 the first year, 5 to 2 the second year, 1 to 4 the third year but we cannot tell when a given case will cease to be infectious, certainly the proportion of infection after the 5th year is infinitesimal, but if it infects the infection is just as virulent as that of a fresh case.

Syphilitic Heredity and Hereditary Syphilis are both entered into very

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thoroughly and are made as comprehensible as it is possible to do with a subject so full of mimicry and apparent contradictory exceptions.

It is a great pity that the necessity of teaching Medical Students has kept up the fallacy of the classification of Ricord of the lesions of syphilis into primary, secondary and tertiary. It confuses the diagnosis of the average medical man who is not on the lookout for localized ulcerating distinctive lesions early in the disease, the great frequency of which is clearly shown in the first three years of the disease by these tables of Keyes.

The chapters on treatment 'are very clear. The lines laid down are simple and supported by a vast experience. The disease is properly held to be eminently curable but the author wisely declines to set an arbitrary limit of time for its curing. Treatment to be rational must accomplish two things, prevent the appearance of symptoms and cure them when they do appear and this may only be accomplished by a combination of hygiene, tonics and specifics. He explains carefully the routine mercurial "tonic" treatment devised by his father and used often with understanding but more frequently without by many thousands of American practitioners.

As much discussion has been had recently as to the relative merits of the various insoluable preparations of mercury used by intramuscular injections the writer is glad to see a full exposition of the values and dangers of this method of treating syphilis the conclusion drawn by the author is the same as that arrived at by the writer. "Most lesions are eminently curable without injections, in a certain few one is driven to use injections by the failure of all else." When one sees in all of the textbooks formulae for the combination of opium with mercury so that larger doses of the former can be used internally it is good to see this practice condemned by the author as taking an unnecessary

chance of making the victim of a depressing disease a devotee of a distinctive habit to add to his misfortunes The writer cannot agree with his statement on page 150 that local treatment avails little in syphilis. The persistent use of the alcholic lotion of sublimate 1-2000 by day and a 10% ointment of ammoniated mercury and calomel by night will banish a papular syphilide from the face in less than half the time that it takes to remove it by mercury administered constitutionally, and the application of Unnas Mercurial plaster mull bound on, or a plaster containing Lead plaster, Resin plaster and Mercurial plaster equal parts spread on sheep-skin and used to cover an ulcerating syphilide or a gummatous tumor will cause the disappearance of these lesions always much earlier than the internal medication and frequently even without it. The writer also after a very long and a very extensive dispensary experience in the treatment of chancroid fails to see the necessity of cauterization by any agent as a routine treatment. With very few exceptions they will all get well inside of two weeks under the application of a dressing 1-4000 solution of sublimate kept moist by a protective and changed at each urination. If any cauterant is needed the acid nitrate of mercury is the most effective, it can be applied with a wooden toothpick after previous cleansing and cocoainization of the ulcers; and the moist dressing is to be subsequently applied.

The chapter upon Syphilis of the Nervous System strikes one as an epitomization instead of a clear guide to diagnosis and treatment of the subject. Bone lesions are beautifully illustrated the skiographs being particularly fine and add to the clearness of the description of the text and object lesson that could not be conveyed without them. The book contains 69 illustrations all good many of them colored. It is printed on good paper and clear type. Every medical man should have a copy for reference.

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GONORRHEA, ITS DIAGNOSIS AND TREATMENT. By Frederick Bauman, Ph. D., M.D., Prof. of Genitourinary Diseases in the Reliance Medical College and Instructor in Dermatology and Venereal Diseases in the College of Physicians and Surgeons, Chicago. D. Appleton & Co., New York, 1908. Price \$1.50.

In the preface the author states that he has endeavored to furnish a concise digest of the diagnosis and treatment of the gonorrheal infection and he has certainly accomplished his object. It is the most practical and readable little volume on the disease that we have yet seen, and covers the subject from the anatomy of the uretha down to the vaccinnation therapy of gonorrhea in a manner which cannot fail to be of great assistance to anyone who may at any time be called upon to treat this class of infection.

Under the heading of "General Considerations of Treatment" is found the following: "Nature does its defending and healing by hyperemia. In our effort to assist nature, we must, therefore try

to increase the congestion of an inflamed part instead of attempting to relieve it as has been wrongly advised." As an internal medicament he says a prescription containing.

Copaibae
Tinct. Cubebae
Spt. Aetheris nitrosi
Mucilage of Acaciae
4 times a day after meals.

has given him good service.

He is of the opinion, however, that
the local application of germicides is
of far greater importance than the in-

ternal administration of drugs.

In speaking of chronic gonorrhea the writer says, "Chronic gonorrhea is the field for instrumental diagnosis and treatment." And lays great stress on the fact that a thorough urethroscopic examination should be made in every case before beginning treatment. The

pathologic conditions as seen by the aid of the urethroscope are pictured and described very fully as is also the method of treatment.

In the chapter on "Gonorrheal Metastasis" and the subdivision devoted to Gonorrheal Arthritis he says, "Besides the appropriate treatment of the original affection, the gonorrhea, the local treatment to be recommended consists of the application of dry hot air, cataplasms, prolonged hot baths and later on a well conducted course of massage. Bier's method of treatment by means of a passive hyperemia also yields good results; especially in acute cases. The later is the method to which I give preference before all others. The most severe pains are often relieved within an hour after applying an elastic bandage, and we can at once begin with passive movements of the affected joint, and the splints can be left off, or only worn at night or in very severe cases. In order to secure good results by this method of treatment the elastic bandage should be applied as high up as possible, and should be worn from 20 to 22 hours out of the 24, The constriction must be strong enough to produce edema."

The work can be heartily recommended to anyone interested in the subject.

COSMETIC SURGERY. The correction of featural imperfections. By Charles C. Miller, M.D. Second edition enlarged. Including the description of numerous operations for improving the appearance of the face; 160 pages, 96 illustrations. Prepaid \$1.50. Published by the author, 70 State street, Chicago.

A useful book.

THE SEXUAL INSTINCT. Its Use and Dangers as Affecting Heredity and Morals. Essentials to the Welfare of the Individual and the Future of the Race. By James Foster Scott, B.A. (Yale University,) M.D., C.M. (Edinburgh University). Late Ob-

stetrician to Columbia Hospital for Women, Washington, D. C., etc. Second Edition Revised and Enlarged. New York, E. B. Treat and Company. 241-243 West Twentythird street, 1908. Price \$2.

"This book contains much plain talking, for which I offer no defence.

Painful as it is to treat subjects so repulsive, a man cannot choose his duty, nor can be honestly evade it."

There are chapters on Marital and Extra Marital Intercourse, Onanism, Abortion, Gonorrhea, Chancroid, Syphilis, The Regulation of Prostitution, and allied subjects. Some of the author's definitions are worth remembering: Adolescence; the period between puberty and the full development of manhood or womanhood; Nubility, from Nuboto marry, the quality or state of being pubile or marriageable. He says, "Love begins at the nose, and every physiologist is well aware of the intimacy between the olfactory and the sexual centers." . . . "In both sexes we occasionally meet with a pathological increase of this passion which irresistibly impels them to seek satisfaction without any moral deterring influence being exercised. In man, this condition is called Satyriasis; in woman Nymphomania. Both of these conditions stand on the borderland of insanity." speaking of Abortion, he says: "Aristotle taught that no child should be born alive whose mother was more than forty or whose father was more than fifty years of age. Rome was filled with abortionists, the crime prevailing, as in our own day, chiefly among the so-called upper classes of society, and infanticide continued to prevail in Rome until the epoch of Ulpian, A. D. 205, who repressed it with severe penalties." This work is one of the best of its class.

THERAPEUTICAL HINTS

Harry E. Alderson, after reviewing the subject of opsonins in the treatment of skin diseases, concludes as follows: I. It has not been proven that opsonic therapy produces good results in acne, furunculosis, sycosis, lupus vul-



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garis, etc., any more expeditiously than the usual approved methods.

- 2. Most of the dermatological cases were "much improved," relatively few were "entirely well." These results were accomplished only after prolonged opsonic treatment.
- 3. So far none of these cases have been reported by dermatologists, but have come from the records of surgeons and general practitioners, who might easily misinterpret the clinical picture presented by certain skin diseases in their different phases.

4. Opsonic treatment is of undoubted assistance in certain chronic bacterial skin diseases. To produce the best results much auxiliary treatment is necessarv.

The abstracter wishes to add that since the above article was published a number of trained dermatologists have reported on the opsonin treatment of various skin diseases, and their conclusions are practically the same as Dr. Alderson's.-Journal of Cutaneous Diseases.

ALUMNI NOTES

CALIFORNIA HOSPITAL NURSES

Miss Crump, '04, is resting at Whittier.

Mrs. Carson, '04, is nursing in Long Beach.

Miss Boyle, '05, is visiting in San Francisco.

Miss Graves, '04, has gone to New York with a patient.

Miss Hammond, '05, has gone East with a patient.

Miss Alice Robinson, '07, is resting at her home in San Diego.

Miss Cassarini, '03, is assisting Miss Waller in the Bard Memorial Hospital, Ventura.

The engagement of Miss Hazel Story, '04, to Mr. Daniel Smith has been announced.

Dr. and Mrs. Arthur Godin have moved from 1228 Ingraham street to 739 Hartford avenue.

Miss Fern, '03, has just returned from San Francisco, after enjoying a visit to the northern part of the State.

Mrs. E. P. Durbin, '04, editor of *The Record Sheet*, recently enjoyed a week in the country with her mother.

Miss Margret Willis, '06, was called to her home in Etiwanda, Cal., Saturday, April 4, on account of her sister's illness.

Mr. Mason, '07, Secretary California Hospital Nurses Alumnae Association, has taken up hourly nursing. We wish him success in his new line of work.

Mr. George Humphries, father of Miss Hilda G. Humphries, '03, is at the Pasadena Hospital, having undergone a serious operation. He is doing well.

Miss Helen Mills, '04, who for three years has been Superintendent of Dr. Broughton's Hospital, Oxnard, has returned to take up her work in this city.

Miss Johnson, '03, accompanied by Miss Barbor, '04, took a trip to Mt. Lowe on Monday, March 30, and spent a night at Alpine Tavern. They report a delightful trip.

Miss Waller, Superintendent of Bard Memorial Hospital, Ventura, was in this city last week, purchasing hospital supplies. Miss Waller has always shown great interest in the California Hospital Nurses Alumnae and did excellent work as president of the association.

Dr. Marshall Lee Martin and Miss Florence Miller, class '02, were married on Saturday, April 11, 1908, at the home of the groom's parents at Pomona. The honeymoon will take place in the Grand Canyon. Dr. and Mrs. Martin will be at nome to friends after May 1, 1908.

During the last few months the California Hospital Nurses Directory has supplied more nurses to out-of-town physicians than ever before. We are glad that these physicians are learning the true worth of California Hospital nurses. Probably our success, as well as theirs, is largely due to our present directory manager, Mrs. Middleton, whose wise policy it is to always send the best nurses in answer to these calls.

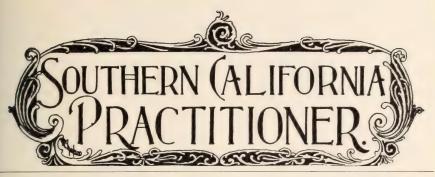
Among the California Hospital graduates who are occupying very good positions at present are: Mrs. C. M. Stummel, '02, Superintendent, Bisbee, Ariz.; Miss Edith M. Thomas, '04, Superintendent, Morenci, Ariz., with Miss Leslie, '05, as Assistant; Miss Waller, Superintendent Bard Memorial Hospital, Ventura, Cal., with Miss Mc-Connell, '04, as Assistant; Miss Elizabeth Hogue, '03, Superintendent Stanford Hospital, Palo Alto, with Mrs. Constance Harshaw Wilson, '03, as Assistant; Miss Hennegan, 'or, Superintendent Whittier Hospital, with Miss Caywood, '04. for Assistant; Perry, '05, Superintendent of Dr. Broughton's Hospital, Oxnard; Miss Fenn, '07, Night Superintendent, and Miss Cochrane, '07, Superintendent of Surgery, in the California Hospital; Miss Sterritt, '04, Superintendent of Surgery, Queen's Hospital, Honolulu. So much has Miss Sterritt's excellent work been appreciated in the Queen's Hospital that the Superintendent has written a personal letter to the manager of the California Hospital Nurses Directory saying she is especially anxious for more of the California Hospital graduates to fill positions in that place.





PRESIDENT MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

LOS ANGELES, CAL.



Vol. XXIII.

Los Angeles, May, 1908.

No. 5.

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DR. F. M. POTTENGER and DR. GEORGE H. KRESS, Assistant Editors.
DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW,
Associated Editors.

BENIGN AND MALIGNANT DISEASES OF THE PANCREAS, WITH REPORT OF CASES.*

BY CHAS. E. ZERFING, M.D., LOS ANGELES.

It is quite remarkable that such an important digestive and metabolic organ as the pancreas should remain in obscurity for so long a period, and receive the comparatively slight pathological and clinical attention which has been given this organ up to very recent times.

While many of the general digestive properties of the pancreas were known for many years, it was not until 1889 when von Mehring and Minkowski demonstrated by their epoch-making experiments, that the pancreas also furnished an internal secretion to the economy which is of vital importance in maintaining the body in a state of health.

Concerning the nature of this internal secretion very little was known until about five years ago, when the brilliant work of Cohnheim, Lepine and others demonstrated the important relation that exists between this internal secretion and the juices of muscle tissue and body cells, in carrying on carbohydrate metabolism.

Notwithstanding the routine examination of the pancreas at autopsy after the thorough manner of Teutonic pathologists ever since the days of Virchow and Rokitansky, this organ was shrouded in a mist of doubt and uncertainty concerning its pathological changes, and only in the last few years has light been shed upon our physiological and pathological knowledge of this organ. This has been largely accomplished through the efforts of the surgeon and the experimental pathologist again demonstrating the fact that if progress is to be made in medicine we must not be guided exclusively by the deductions made from autopsy findings, which are so often misleading in portraying the conditions which existed during life. And it remained for the abdominal surgeon to point out the fact that by far the most important pathological changes in the pancreas were those which were associated with gall stone disease, the latter inducing the various types of acute and chronic pancreatitis; and through this knowledge the belief, that

^{*}Read before the Los Angeles County Medical Association, Friday, March 26, 1908.

cancer of the head of the pancreas was the most frequent and important lesion, was dispelled.

In order to properly appreciate the clinical phenomena attending pancreatic affections, a brief allusion to the more important anatomic and physiologic knowledge will be mæde. The limits of this paper forbid a detailed anatomical description, but the relations of the principal pancreatic duct, the duct of Wirsung, to the common bile duct will be mentioned.

The principal duct of the pancreas is the duct of Wirsung, which unites with the common bile duct within the wall of the duodenum to empty by a common opening at the inner side of the second portion of the duodenum, 3 or 4 inches from the pyloris. As the opening is situated at the summit of a small papilla, this point is often called the Papilla of Vater, or major papilla, in contrast to the minor papilla which is situated about one inch higher up and is the point of emptying of the second and minor duct of the pancreas, the duct of Santorini.

After the union of the duct of Wirsung and the common bile duct, an expansion of the duct takes place called the ampulla of Vater, which is about one-fifth of an inch in length and, as already stated, opens into the second portion of the duodenum at the papilla of Vater. The ampulla of Vater is a point where gall stones very frequently lodge, giving rise to grave pancreatic and biliary changes.

The existence of the lesser pancreatic duct, the duct of Santorini, is very inconstant so that according to the researches of Opie and others, in at least 30 per cent. of cases where there is complete occlusion of the main duct, the lesser duct cannot be relied upon to convey the pancreatic juice into the intestine.

It will be remembered that the common bile duct is divided into four parts:

- (1) Supra duodenal, (2) retroduodenal,
- (3) pancreatic, (4) intra-parietal, or that part which lies within the wall of the duodenum.

The third, or pancreatic portion, affords particular interest for in 62 per cent. of all cases it is completely surrounded by pancreatic tissue and in 38 per cent. lies in a groove of pancreatic gland. This embracing of the common bile duct by pancreatic tissue readily explains the obstructive jaundice which is such a common and important symptom of disease of the head of the pancreas, especially cancer and interstitial pancreatitis.

The intimate relation of the pancreas with the stomach, duodenum, aorta, vena-cava, the coeliac plexus of sympathetic nerves, the portal vein and its branches, the colon, spleen, left supra-renal capsule, left kidney, the common bile duct and middle colie artery serves to explain the origin of the grave pathological changes seen in the pancreas, and makes plain the complex symptomatology presented in pancreatic affections.

HISTOLOGY.

The pancreas is often called the abdominal salivary gland, and like the parotid is a compound tubular gland composed of branching ducts terminating in acini of a tubular form. The acini about the tubular ducts are grouped together to form primary lolules which are separated from one another by a quantity of connective tissue, the so-called interlobular connective tissue, in contradistinction to that which separates the individual acini called the intra lolular or inter-acinous connective tissue.

Throughout the organ are seen on microscopic examination groups of small spherical or polygonal cells which seem to lie between the acini and be quite different in structure from the latter. These are the so-called islands of Langerhans, described by him in 1869. There has been much speculation con-

cerning the exact structure and functions of these bodies. It seems that they have no connection with the ordinary secreting ducts of the gland, and from the observation of Opie and others it seems that they furnish the special internal secretion of the pancreas, and when diseased as in the so-called interacinous interstitial pancreatitis, diabetes mellitus develops.

PHYSIOLOGY.

The pancreatic juice is a clear, odorless, colorless syrupy fluid of a strong alkaline reaction and a specific gravity of 1030.

It depends for its digestive activity upon 4 or 5 ferments or enzymes. (1) Amylopsin, which acts on starches and sugars converting them into maltose, which in turn is converted into glucose, ir which condition the carbohydrates reach the liver through the blood. The liver cells act upon the glucose, converting it into glycogen or animal starch, which is finally stored in the liver cells and the muscles of the body to be called upon for the needs of the economy in the form of heat, work, and energy.

The destruction of the glucose for the needs of the system is accomplished through a process of oxidation, which as pointed out by Cohnheim about five years ago is brought about by the combined action of the so-called internal secretion of the pancreas acting in union with a secretion obtained from the muscle and body cells.

- (2) Trypsin, or trypsinogen, a substance analogous to the pepsin of the gastric juice and having the property of acting on proteids, converting them into albumoses and peptones, in which condition they are absorbed in the small intestine and enter the blood.
- (3) Steapsin, or the fat-splitting ferment which converts neutral fats into fatty acids and glycerine, and in conjunction with the action of the bile causes a saponification and an emulsification of the fats in which condition

they are absorbed by the lacteals in the small intestine. A milk-curdling ferment, and a fifth called lactase are of minor importance.

A detailed account of the action of the three important ferments of the pancreatic juice will not be given in this paper, but upon an accurate knowledge of such action is based much of our clear comprehension of the symptomatology and diagnosis of pancreatic affections. In 1889 von Mehring and Minkowski discovered that if the pancreas be completely extirpated in dogs that all of the symptoms of diabetes resulted, producing glycosuria, great hunger and thirst, marked weakness, rapid emaciation and death in from two to four weeks. This result followed even when no carbonhydrate food was administered. They also demonstrated that if one-fifth or more of the gland was left behind that these symptoms did not follow even if the pancreatic juice was prevented from flowing into the duodenum, thus showing that diabetes was not due to lack of pancreatic juice. It was furthermore shown that after complete removal of the pancreas, followed by a grafting of a portion of the gland into the peritoneal cavity or under the skin of the abdominal wall, that diabetes did not result. Further, complete ligature of the pancreatic ducts did not lead to permanent glycosuria. This condition which follows removal of the pancreas is sometimes spoken of as pancreatic diabetes, and is very analagous to pancreatitis mellitus, seen in pathological conditions in man. The cause of the glycosuria and the glycaemia, that is, the accumulation of sugar in the blood, was not very clear to the early investigators, as von Mehring and others; but it appeared to be due to a lack of something which was furnished to the economy in health by the pancreas through the blood or lymph stream. The nature of this substance, having the property of destroying the sugar in the blood

and neutralizing it in metabolism, remained a mystery up to a few years ago, when Cohnheim and others showed that this substance is due to the union of elements obtained from an internal secretion of the pancreas, and that from the muscles and cells of the body. This substance is not a ferment, but is analagous to other internal secretions, as adrenalin, iodothyrin, etc. While injury and disease of the floor of the fourth ventricle in the brain is followed by diabetes and although glycosuria is a common symptom in many nervous and constitutional affections, it seems that diseases of the pancreas is the cause of the vast majority of cases of diabetes. Thus Opie found the pancreas diseased in 79 per cent. of cases of diabetes.

PATHOLOGY.

Our knowledge of the pathology of the pancreas, while still very incomplete, has been largely obtained through experimental work upon the lower animals, and by observations in the laboratory, at the bedside and operating table, and unlike most other organs the post mortem observations made upon the pancreas have been very misleading, due largely to the rapid changes taking place immediately after death through bacterial activity and so-called auto digestion as pointed out by Chiari and others.

In a general way the pancreas is the seat of the various atrophies, degenerations, inflammations, etc., seen in other organs and the causes producing these changes are likewise similar: so that in many respects the pancreas is affected in a manner very similar to the liver. Among these general causes may be mentioned syphilis, especially the congenital variety, alcoholism, the acute infectious diseases, tuberculosis, general arterio-schlerosis, old age, etc., and while these have long been known to produce grave changes in the pancreas, it is only very recently that the most important etilogical factors have been recognized, especially cholelithiasis, infections of the duodenum, and diseases of the neighboring organs, as the stomach. It is very gratifying to remember that some of the best work along this line has been done by Americans, among whom may be mentioned Senn, Fitz, Opie. Flexner and the Mayos. Senn, as early as 1886, published a very exhaustive original work, relative to diseases of the pancreas. In 1889 Fitz of Boston aroused renewed interest in the pancreas when he described the various types of acute pancreatitis. Since that time there has been much experimental work done upon the lower animals, which has given us much light upon the etiology of acute and chronic pancreatitis.

Flexner injected a number of substances into the pancreatic ducts, producing a severe and fatal pancreatitis, accompanied by hemorrhage, fat necrosis and glycosuria. Among the substances which produced these results were acids, alkalies, formalin, suspensions of various micro-organisms, as bacilus, pyocyaneus, etc.

Many observers have shown the relation which exists between diseases of the pancreas and morbid changes in the bile passages, especially cholelithiasis; nor is it at all surprising that this relationship should exist when we remember that the most frequent cause of gall stones is a bacterial infection extending from the duodenum upwards to the common bile duct and gall bladder. Further, that the common bile duct and the main pancreatic duct usually empty by a common orifice at the papilla of Vater in the duodenum.

It can thus be readily seen that a bacterial infection of the pancreatic duct can readily result from an infective process in the duodenum. Opie and others have furthermore shown that when a small stone is lodged in the ampulla of Vater that the bile will be directed upwards into the pancreatic

duct where it caused a fatal acute pancreatitis. This observation was verified by experimental work by Opie, Flexner and others, in which bile was injected into the pancreatic ducts with a fatal result within twenty-four hours, and they concluded that the bile salts are the cause of the inflammatory changes in such cases. And if the animal survived a sufficient length of time the gland became the seat of purulent and necrotic changes; thus giving rise to the belief that suppurative and gangrenous pancreatitis was only an advanced stage of acute hemorrhagic pancreatitis.

Pathologists are somewhat divided in their opinion as to whether the inflammation precedes the hemorrhage, or whether the hemorrhage precedes the inflammation. While the inflammatory changes probably precede the hemorrhage in the majority of cases, this is not true of all, as pointed out by Robson. Korte, Carnot, Opie, Flexner and others have explained the etiology of chronic interstitial pancreatitis along similar lines when associated with cholelithiasis. Korte caused a chronic interstitial pancreatitis by the injection of pure cultures of bacillus coli. Flexner found that when he injected solutions of pure bile salts into the pancreatic ducts, that the animals died very suddenly of acute hemorrhagic pancreatitis. But if the bile salts were mixed with a colloid substance, as gelatin, the lesion produced was found to be less acute and destructive than that following the injection of bile salts alone. Thus it is seen that both acute and chronic inflammation of the pancreas as e result of common duct obstruction may be due to several causes, such as the action of micro-organisms and to mechanical and chemical effects of the bile and pancreatic juice. It is also probable that these same factors have much to do in producing the more rare forms of pancreatic disease, such as calculus, fat necrosis, cysts and atrophy.

In chronic interstitial pancreatis it is interesting to note that two chief forms of connective tissue development takes place; one, the so-called inter-lobular type in which the connective tissue between the lobes and lobules are mostly affected, and the inter-acinar type, in which the connective tissue within the lobules between the acini developes. In the latter the islands of Langerhans are early affected and diabetes is a common symptom.

Acute hemorrhagic pancreatitis usually begins' with sudden and severe pain in the upper abdominal region, usually most marked in the epigastric region. The pain is accompanied by great shock and vomiting. There is great tenderness in the region of the pancreas. Constipation is usually marked so that many of these cases have been mistaken for acute intestinal obstruction; but as a rule flatus can be passed. The pain, often paroxysmal in character, is so intense as to lead to collapse. The point of greatest tenderness is just above and to the right of the umbilicus. Vomiting sets in early, consisting of food, then bile, and finally black, grumous, altered blood. At first the upper abdomen alone is distended with marked rigidity of the abdominal muscles, but later in the disease the entire abdomen is greatly distended and boardlike, and has all the characteristic of an acute peritonitis. The temperature at first may be subnormal, or normal, but is soon elevated. Cases have been recorded in which the temperature was subnormal until death supervened.

Jaundice may be marked, due to obstruction to the common duct at the ampulla of Vater by a stone. At autopsy the pancrease in these cases is found to be the seat of extensive hemorrhages, gangrene, or abscess formation, with extensive fat necrosis of the pancreas and cmentum.

On account of the comparative infrequency of the condition and the vague

symptoms of peritonitis in the upper abdomen, it is often difficult to make a diagnosis. In this condition Fitz says:

"Acute pancreatitis is to be suspected when a previously healthy person or sufferer from occasional attacks of indigestion is suddenly seized with violent pains in the epigastrium, followed by vomiting and collapse, and in the course of twenty-four hours by a circumscribed epigastric swelling, tympanitic or resistant with a slight rise of temperature.

In performing laporotomy fat necrosis of omentum is found to be almost pathognomonic. Early in the course of the affection acute hemorrhagic pancreatitis must be differentiated from intestinal obstruction, perforating gastric and duodenumal ulcer, ruptured gall bladder, phlegmonous cholecystitis, and appendicitis. Late in the disease the symptoms are those of a general peritonitis. The examination of the urine will often reveal pancreatic crystals, and cases have been reported in which glycosuria existed.

TREATMENT.

As soon as the diagnosis is made, laparotomy should be performed. A number of cases are on record where surgery has saved the patient whereas if treated medically the vast majority of the cases die.

Chronic pancreatitis is now recognized as being the most important disease of the pancreas, for not only is it much more frequent than was formerly supposed, but on account of the usual association with gall stones of the common duct, its treatment by early operation gives such brilliant results that its careful clinical consideration is of the utmost importance.

In the large majority of cases of interstitial pancreatitis, there will be a preceding history of gall stones characterized by attacks of gall stone colic, jaundice, and a history of Charcot's biliary intermittent fever. On palpation tenderness will be elicited in the epigastrum just above the umbilicus, and some fullness may be present.

In many cases the pain will extend to the left scapular region and to the back. In other cases not associated with gall stones there will be a vague history of gastric disturbance, with little or no pain, followed in a variable period of time by jaundice. Coincident with the jaundice dilation of the gall bladder may be noticed. In some cases a tumor may be felt in the region of the head of the pancreas, but this phenomenon is very inconstant. Loss of flesh is usually pronounced. Frequent bowel movements, pale in color, very offensive, and containing a large quantity of neutral fat, is a common symptom. Cammidge has called attention to the socalled pancreatic reaction, which he was able to obtain in the urine in nearly all cases of inflammatory infections of the pancreas. This reaction consists in the formation of crystals of a specific character, when the urine is treated by a method which on account of its complexity will not be here further considered.

Glycosuria is a common symptom, and is much more frequent than in cancer of the head of the pancreas. In advanced cases undigested muscle fiber will be present in the stools, which is due to the lack of the proteolytic action of the pancreatic juice.

A very large percentage of neutral fats will be present in the stools. In the differential diagnosis the following conditions must be considered: Cancer of the head of the pancreas, cancer of the common bile duct, and the papilla of Vater, cancer of the liver, gall stones, and catarrh of the common bile duct. In this connection it is interesting to note the size of the gall bladder in affections associated with obstructive jaundice. Courvoirsier many years ago called attention to the apparently paradoxical rule that when the common duct was chronically obstructed by a stone,

the gall bladder in more than two-thirds of the cases was small and contracted, and not palpable in the living, even though operation or autopsy revealed the presence of a number of stones in the gall bladder and common duct. This fact has since been confirmed by every abdominal surgeon. But when the cause of the obstruction in the common duct is due to pressure from without, as by enlargement of the head of the pancreas, the gall bladder in the majority of cases was enlarged, which is in harmony with preconceived notions concerning this phenomenon. The reason of the contraction of the gall bladder in cases of obstruction of the common duct by stone, is due to the long-standing associated infection of the bile passages of a bacterial nature, leading to contraction of the walls of the gall bladder and diminution in its size. Cancer of the head of the pancreas is to be differentiated from chronic pancreatitis by the age of the patient, cancer occurring usually after forty, the absence of a history of gall stone colic, the great cachexia, anemia, and loss of strength and weight, and especially the rapid and progressive development of these symptoms. The jaundice is usually very marked and does not fluctuate, and the gall bladder is usually enlarged. Cammidge reports an absence of his reaction in 75 per cent. of cases of cancer with positive results in only 25 per cent. Late in the disease acites and oedema of the lower extremities are common terminal symptoms of cancer of the head of the pancreas.

The prognosis of chronic interstitial pancreatitis is favorable, if dependent upon gall stones and if the latter are removed before permanent changes take place in the organ involving the islands of Langerhans and producing permanent glycosuria. Although the latter if moderate in degree offers no contra indication to operation. The two following cases of pancreatic disease were seen by the writer and while not quite typical

offer several interesting features. The first case was one of chronic interstitial pancreatitis, caused by syphilis and alcoholism, and in which the diagnosis was made by Kovacs in his Wards in Vienna after a very minute and painstaking study of the case. Woman, age 53, with a history of syphilis and alcoholism. Dyspeptic symptoms had existed for past year. There was no history of gall stones. Six months prior to admission jaundice developed. At no time did she suffer from pain in the epigastrium. Examination found the woman fairly well nourished, having lost twenty pounds in the last eighteen months. There was a moderate degree of jaundice, which showed considerable fluctuation. No tumor could be detected in epigastrium, and no enlargement of the gall bladder could be established. The liver showed some decrease in size. There was moderate amorexia, but no great aversion to fats and meats. Glycosuria was present, varying from I to 5 per cent. Stools were frequent, light colored, offensive, and contained much neutral fat and undigested muscle fiber. Patient seemed to improve under antisyphilitic treatment, and jaundice almost disappeared, but gradually became worse later, developing fever, signs of pericarditis, and pleurisy, with effusion, and died with all the symptoms of a failing heart. At the autopsy the liver was found to be the seat of an atrophic cirrhosis. The gall bladder was not enlarged; there were no gall stones in the hile passages; the pancreas was much smaller than normal, weighing 68 grams. The average normal weight being between 80 and 100 grams. The pancreas was indurated and presented numerous small cysts, and was the seat of a chronic interstitial inflammation. The autopsy findings were very carefully controlled by the head of the pathological department of the University of Vienna, Prof. Weichselbaum, who at that time was collecting data for his monograph on the pancreas in relation

to diabetes, which has since taken front rank in medical literature.

The second case was one of primary cancer of the pancreas, associated with metastasis to the liver. Woman, age 58; was seen by the writer last July at Long Beach. The case was also studied by my colleague, Dr. McReynolds, who was present at the autopsy. Family history negative. Previous history up to last illness negative. Was mother of four children, all living and well. No syphilitic or alcoholic history. No history of gall stones. Enjoyed absolute health up to one year previous. Ten months ago complained of vague digestive disturbances, which in the course of three months were accompanied by pain in the epigastric region. A few months after the onset of these symptoms, patient began to have frequent stools of semi-solid consistency, and very light color. They averaged four in twenty-four hours. Five months previous she developed jaundice of a rather severe grade, and two months previous noticed marked swelling of the abdomen and lower extremities. She had lost thirty pounds in six months. Examination showed skin, conjunctivae, and mucous membranes deeply stained with bile pigments. The jaundice was of a distinctly brownish black variety, rather than a saffron yellow. Small ecchymotic hemorrhages were seen in skin; heart and lungs negative. She complained of moderate dyspnoea, which was due to the enormous ascitic collection in the abdomen. A febrile course. The abdomen was enormously distended, was quite tender in the upper half, but no mass could be outlined, although a feeling of great resistance was experienced. The urine was free from sugar at all times; contained a small amount of albumen and was markedly stained with bile pigments. No microscopical examination of the caeces was made. There was marked oedema of lower extrem-Eight quarts of ascitic fluid. which rapidly reaccumulated, were withdrawn. After each tapping an enormously enlarged liver could readily be outlined, and presented numerous nodules with umbilications, which could be readily palpated through the abdominal wall. The gall bladder could not be felt. The diagnosis of secondary cancer of the liver was made, but we could not locate the primary growth. weeks later patient died, and consent was obtained to examine abdominal cavit only. The liver was enlarged to twice its normal size and was the seat of multiple, metastatic cancerous growths. The gall bladder was not enlarged, and no stones were found in the bile passages. The stomach and intestines, kidneys, pelvic organs, were free from disease. The pancreas was found enlarged to twice its normal size, very hard and nodular. The common bile duct was not surrounded by pancreatic tissue, but lay in a groove of gland substance; throughout its entire length it was found free from cancerous nodules. Microscopical examination of the pancreas by City Bacteriologist, Dr. Horton, revealed a scirrhus careinoma with secondary metastasis to the liver and lymph gland of the gastro hepatic omentum.

717 Grosse Building.

SURGERY OF THE PANCREAS.*

BY DR. ROBERT P. MCREYNOLDS, LOS ANGELES.

It seems to me that in the surgery of the pancreas the crowning glory has been added to abdominal surgery. It represents the result of years of the best combined scientific work of the internist and the surgeon, and will remain for all

^{*}Read before the Los Angeles County Medical Association, March 27, 1908.

times to come a lasting monument to both. A glance at the anatomical relations of the pancreas furnishes a ready explanation of why it remained for so many years a pathological enigma to the medical profession, and why the surgeon has been so slow and cautious in approaching it.

The pancreas is a retro-peritoneal organ lying transversely across the abdomen at or about the level of the second lumbar veretebrae. The head is snugly placed within the loop of the duodenum and the tail reaches over to the spleen. It is covered by the stomach and post parietal peritoneum. Behind it we find the crurae of the diaphragm, the inferior vena cava and the aorta, superior mesenteric vessels, commencement of the portal vein, left renal vein, left kidney and supra renal capsule. Above it—the coeliac axis, the hepatic and splenic arteries. Below it—the transverse portion of the duodenum, transverse colon and transverse mesocolon.

It is plain that Nature evidently intended to place it as far away from danger as possible-no organ in the body is better protected from the liability of traumatic injury and certainly none more difficult of surgical approach. However, its intimate association with the stomach. duodenum, gall-bladder, transverse colon, spleen and kidney render it peculiarly liable to be involved secondarily from primary diseases of these organs. The relation of the greatest interest from a surgical standpoint is that existing between the bile passages and the pancreas. The position of the common bile duct and the main pancreatic duct (canal of Wirsung) is such that pathological changes in either organ or its duct can easily be transmitted to the other. The infection may proceed directly through continuity of tissue or indirectly through the medium of the bile or pancreatic fluid.

The anatomical arrangement of the terminal portion of these two ducts is of paramount interest to the surgeon:

Ist—The usual or normal arrangement is for the two ducts to open into the ampullae of Vater and have a commo opening into the duodenum.

2d—The pancreatic duct opens into the common bile duct at a variable distance from the duodenum.

3d—The two ducts have separate and distinct openings into the duodenum.

Our inability to determine during life which of these conditions exists, together with the uncertainty about the presence or absence of an accessory pancreatic duct (duct of santorini) adds somewhat to the difficulties of making a correct diagnosis. In fact to make an accurate and positive diagnosis if primary disease of the pancreas is one of the most difficult things the surgeon encounters. The position of the organ renders useless for diagnostic purposes all the physical signs elicited by auscultation and percussion; and inspection and palpation frequently fail to reveal anything abnormal although a gross lesion may exist. The diagnosis then must be established by noting secondary changes affecting adjacent organs, or by detecting some alterations or abnormalities in the normal physiological functions of the gland. We know that the latter will of necessity produce disturbances of metabolism and digestion, but unfortunately these too frequently manifest themselves only in the last stages of the disease and after all hope from surgical aid is past. It is this fact which has retarded for so many years operative work undertaken solely and directly for the relief of primary diseases of the pancreas. One of the most interesting problems for the future is to find some test (physiological, chemical or microscopical) which applied to the blood, the secretion or excretions of the body will enable us to make an early, accurate, positive diagnosis.

It is of interest to note that almost all our present knowledge of the pancreas and the pathological changes of which it is susceptible are the result directly

or indirectly of observations and facts gleaned by the surgeon in his operations upon the stomach, gall-bladder, intestines and the kidneys. Mikulicz discovered for example that in case where he did a resection of the stomach and it was known absolutely that the pancreas was not injured or disturbed only 27.50% died directly as the result of the operation; on the other hand in cases where it was injured 70% died-an enormous difference of 42.5%. This was an observation of inestimable and farreaching surgical value, because it directed attention to the effect of escaping pancreatic fluid, and resulted in a series of experiments to determine the exact pathological changes produced when it came in contact with the surrounding tissues. These investigations have proven conclusively that the pancreatic fluid itself is not infectious, but that when it escapes from its normal channel into the adjacent tissues it partially digests them, and in so doing lessens or renders nil their power of resistance to all forms of bacterial invasion. This teaches us then that a serious or fatal infection is liable to follow in the wake of all operations upon the pancreas unless unusual precautions are taken to guard against it. The surrounding structures must be protected by carefully walling them off with gauze, the escape of the fluid prevented if possible, and last and most important of all provision must be made for free drainage of the peritoneal cavity in each and every case where there is any possibility of injury or disease of this gland. The pancreas can be approached extra peritoneally through a lumbar incision—usefully in a limited number of cases where only a portion of the head or tail are to be investigated. The usual incision, however, is one made above the umbilicus, and either through or just to the right of the median line-the pancreas can then be exposed by dividing the gastro-colic ligament, gastro-hepatic ligament, the transverse mesocolon, or by pushing the peritoneum aside and going down along the second portion ofthe duodenum.

A minute description cannot be attempted in a paper of this length, but I should like to refer briefly to a few of the most important and special indications for operative interference:

I—Injuries to the pancreas resulting from stab or bullet wounds or from severe contusions or blows in the epigastric region.

Fortunately, the surgeon is not called upon, nor is it necessary, in these cases to make a positive diagnosis. If the nature of the wound, the presence of hemorrhage or shock is sufficient to warrant the belief that any of the vital organs are injured immediate exploratory operation is demanded—on opening the abdomen if the pancreas is found to be injured then the proper surgical treatment should be instituted. It is possible by deep mass sutures to successfully approximate the torn ends in a ruptured or partially ruptured pancreas (such a case reported by Garré), but in the large majority of cases the best the operator can do is to stop the hemorrhage either by ligating the bleeding vessels, or by a packing of gauze, and then provide for free drainage of the peritoneal cavity. Prof. von Mikulicz, in a careful research of the literature, was able to collect the report of forty-five cases of pancreatic injury (twenty-one penetrating wounds and twenty-four subcutaneous wounds from blunt force). Of the twenty-one penetrating wounds, twelve were of gunshot origin and nine were stab wounds. Five of the gunshot wounds were operated upon; two died and three recovered; the seven not operated upon died. All the stab wounds were operated upon; one died and eight recovered. These statistics speak for themselves, and teach us that all pancreatic injuries should be operated upon and operated upon early. 2—Inflammations:

a—Acute Hemorrhagic Pancreatitis.— A discussion of its etiology need not de-

tain us here, for it matters not to the surgeon whether it results from a stone so located in the common bile duct that it forces the bile into the main pancreatic duct or from an infection finding its way to the gland directly from the duodenum or indirectly through the medium of the blood current, the symptoms upon which he bases his decision for or against operative interference are the same. The disease is so sudden in onset, so quickly and universally fatal that the diagnosis has generally been made at post-mortem and consequently the number of cases operated upon has been comparatively small. But there have been enough to justify the statement that if the condition could only be recognized in time and the necessary surgical aid given many of these patients could be saved-really a life snatched from the grave. I think the general practitioner as well as the specialist should be constantly on the alert for them and have the symptoms so indelibly impressed on their minds that they will waste no unnecessary time in arriving at a probable diagnosis.

They should view with alarm the sudden onset, the sharp, overpowering pain in the epigastric region, followed a little later by the most profound depression and shock—the peculiar and characteristic facial expression which seems to indicate immediate dissolution, the incessant nausea and vomiting, the obstinate constipation, the beginning subnormal followed quickly by an elevation of temperature—all the physical signs of first a local followed rapidly by a general peritonitis (a rigid, painful abdomen, a rapid bounding pulse, marked dyspnoea, et cetera).

There is indeed nothing to differentiate it absolutely from a ruptured gastric or duodenal ulcer, acute intestinal obstruction, mesenteric, embolism, gangreous appendicitis, suppurating cholecystitis or cholangitis, but this is not essential; there is enough, quite enough to demand in no unmistakable terms a prompt, im-

mediate abdominal exploration. then that, noting the absence of injury to the other organs, a positive diagnosis of acute hemorrhagic pancreatitis is made and confirmed by observing the presence of fat necrosis and finding in the peritoneal cavity a small quantity of bloody exudate—the examining finger detects a pancreas enlarged and to the feel soft and boggy. The operator should proceed at once to relieve the tension and congestion in the gland either by a free exposure of it, or by making multiple incisions into it. The operation should be finished in the shortest possible time and it is probably better to use local anaesthesia. In no other condition is speed and rapidity of work such a sine qua non.

b-Subacute Pancreatitis.-In a small percentage of cases not operated upon and the patient rallying from the acute attack a phlegmon forms. The symptoms are those of the acute attack followed by a profound sepsis (high temperature, rigors, sweats, diffuse abdominal distension, et cetera). These cases offer a more favorable prognosis after operation (which consists in opening and draining the abscess) than the acute cases. If it was not for the fact that so many die in the acute attack it would probably be better surgery in all cases to postpone operative work until the patient had a chance to recover somewhat from the initial shock.

c—Chronic Panereutitis.—These are the ones that furnish food for reflection, test the ability and try the skill of the best diagnostician. However, with our better and more correct understanding of its pathology and especially from the knowledge gained from the improved methods of studying the stools and the urine it should be possible, and it is possible now in some cases, to make a positive diagnosis. The so-called interacinar form of chronic pancreatitis accompanied by glycosuria, chronic pancreatitis following syphilis, alcoholism, old age, arterio-sclerosis, etc., will not

be considered because they are not of any surgical interest. These must at the present time be left to the tender mercies of the internist and a kind, beneficent, charitable Providence.

On the other hand, the chronic interstitial interlobular pancreatitis, the result of an infection extending from the duodenum, or the bile passages, or from some mechanical interference with the outflow of the bile or pancreatitic fluid furnishes one of the most interesting problems the surgeon encounters. It is a distinct surgical disease and the only successful treatment is by operative interference, which if undertaken early enough gives the most gratifying results. The gall-bladder should be opened, all stones removed from it and the bile ducts, and then either temporary drainage provided for by forming an external fistula through the abdominal wall, or a permanent one by making an anastamosis between the gall-bladder and the intestine. The course of the bile current is thereby changed and rest afforded to the congested, inflamed mucus membranes-the thick, viscid bile is replaced by a healthy, normal secretion. The relief to the pancreas results from the removal of the three potent factors largely instrumental in producing the disease under consideration—i. e., the inflammation of the bile passages, the infected bile and the gall-stones.

A differential diagnosis between carcinoma of the head of the pancreas and chronic pancreatitis is of the greatest importance, for while the first is prohibitive from an operative standpoint, the latter as we have tried to show is amenable to such treatment. It has been claimed that chronic jaundice associated with an enlarged, distended gall-bladder is a pathognomonic sign of cancer of the head of the pancreas (Courvoisiers Theoretically the accuracy of Law). this law cannot be doubted-cancer of the head of the pancreas should produce distension of the gall-bladder-but clinical experience will, I think, record

some exceptions to this. I have recently seen in consultation two cases which bear somewhat on this point. The first case with Dr. Chas. E. Zerfind has been so fully and accurately described by him in the preceding paper that it needs no further reference from me except to emphasize the fact that the gall-bladder was not enlarged and that it was undoubtedly a case of primary carcinoma of the head of the pancreas. The second case seen with Dr. Chas. L. Garvin only a few weeks ago I had hoped to report in detail tonight, but the pathologist has not yet finished the sections taken for microscopical examination. Until we get these the diagnosis of primary carcinoma of the head of the pancreas will have to be held in abeyance. At the post-mortem we were unable to differentiate absolutely between primary cholelithiasis (followed by a ruptured gall-bladder and secondary involvement of the duodenum, transverse colon, and the pancreas) and a beginning malignancy of the head of the pancreas accompanied by gall-stones and pericholecvstitis.

3-Pancreatitic Cysts:

In the year 1882—only twenty-six years ago—Gussenbauer reported the first operation for cyst of the pancreas—today the literature contains one hundred and sixty cases or more. It seems strange that the pioneers in the study of modern pathology, men like Virchow and others, should have completely overlooked the importance of the pancreas and regarded its pathology of practically no interest.

I think to the late Dr. Nicholas Senn should be awarded the honor of being the first to appreciate and understand the surgical possibilities which this gland offers. He was certainly the first surgeon in America, and one of the first in the world, to systematically study cysts of the pancreas and to him we are indebted for what seems to be the true pathological explanation of their formation. It would appear at the first glance

that complete obstruction to the outflow of the pancreatic fluid would of necessity cause a cyst (a true retention cyst). But Senn pointed out, and proved by numerous experiments upon dogs, that a cyst would not form unless there was first some change in the parenchyma of the organ—an atrophy, degeneration or inflammation.

The subject of pancreatic cysts has received much attention from systematic writers in the last few years, and is pregnant with so much of interest that I regret that the scope of this paper does not permit me to enter into it. I shall, therefore, disregard all pathological details and briefly refer to one cyst, which (lacking a better name) I will call a "clinical pancreatic cyst"—that is one which from its position, size and symptoms demands some form of operative interference. They are generally found in adults, but may occur at any age (Dennis reports a probable case in a child nine months old)-men and women are about equally affected.

The early symptoms are rather vague. Some of the most important are: indefinite pain and tenderness in the epigastric region, loss of weight and strength, more or less intestinal indigestion and gastric disturbances. The severity of the symptoms depends largely upon the way the cyst grows.

If the stomach or transverse colon is pushed up against the anterior abdominal wall the functional disturbances will be more pronounced than if they are displaced upward or downward or if the cyst should force its way up between them. This point is well illustrated by the history of two cases operated upon and reported by Knott (Lancet-Clinic, Cincinnati, 1904). In the first case the stomach was flattened up against the anterior abdominal wall and so produced decided functional disturbances-a correct diagnosis was made before operation. In the second case the stomach was not much pressed upon, there were but few gastric symptoms and a diag

nosis of cyst of the right kidney was made before operation.

There is indeed no pre-operative pathognomonic sign which would enable one to differentiate a cyst of the pancreas from an ovarian cyst, echinococci cyst of the liver or spleen, cystic degeneration of the supra-renal capsule, hydronephrosis, pyo-nephrosis, etc. In suscases careful consideration should be given to the history of the growth and especially to the manner and rate of its development. The Cammidge test applied to the urine has its greatest diagnostic value in the inflammatory affections, but should be sought for in all cases where any kind of pancreatic disturbance is anticipated.

I have had an opportunity to see and operate upon only one case of cyst of the pancreas (case reported in full before the Philadelphia Academy of Surgery on March 6th, 1905). I regret to say that a diagnosis of cyst of the ovary was made before operation. However, the mistake was rectified after the abdomen was opened, and later by finding the characteristic ferments in the fluid the correct diagnosis established. We evacuated eight or ten quarts of chocolate colored fluid, removed part of the sack and stitched the remainder to anterior abdominal wall, drained the cavity with strips of gauze. The patient made a good, uneventful recovery.

It is possible to enucleate the cyst in toto (one case reported by Parks), but the operation of choice, and the one that should be applied in most all cases is to open the abdomen, evacuate the fluid and drain.

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SOME PHASES OF THE PHYSIOLOGY OF THE PANCREAS.

BY LYMAN BRUMBAUGH STOOKEY, PROFESSOR OF PHYSIOLOGY, MEDICAL SCHOOL. UNIVERSITY OF SOUTHERN CALIFORNIA.

I have been asked to present to you a brief resume of our knowledge relative to the physiology of the internal secretion of the pancreas. Since the epoch-making researches of von Mering and Minkowski in 1889 showing that pancreatectomy is followed by a glycosuria invariably terminating fatally the pancreas has been the subject of much study. Some of the findings of ten years ago are familiar to us all, namely, if a small part of the pancreas is allowed to remain, sugar does not appear in the urine, and if a small piece of the organ is engrafted subcutaneously or peritoneally after pancreatectomy glycosuria does not result, but subsequent removal of this engrafted portion of the gland again brings about diabetes, showing that the absence of the external secretion in the duodenum is not responsible for the glycosuria, but that some product of metabolism entering the blood or lymph directly is essential for the normal oxidation of carbohydrate in the body.

Some years ago it was believed that this important function of elaborating an internal secretion is not the work of pancreatic cells proper, but of the islands of Langerhans. In cases of pancreatic diabetes Opie, Ssobolew and Herzog found at autopsy marked degenerative changes in the islands of Langerhans which seemed to them to

lend further evidence in support of this belief.

More recently, however, Herxheimer in his exhaustive examinations, has observed that many cases of pancreatic glycosuria show more serious changes in the parenchyma than in the islets of Langerhans. It is only fair to say that the evidence at hand does not warrant our connecting the internal secretion of this organ and the islands of Langerhans.

Recently the islands of Langerhans have been studied by Laguesse, Dale, Vincent and Thompson, who contend that the islands are not of separate embryological development, but that they represent a stage in the development of the ordinary secreting alveoli of the pancreas. Prolonged activity of this organ leads to an increase in the number of the islands, a considerable part of the secreting tissue being converted into islet tissue. To quote Dale "pancreatic growth is a function of islet tissue cell, multiplication being observed only in the islet and since these islets are formed from the alveoli there must be a constant disappearance of islet tissue and a new formation of alveoli,"

The nature of the internal secretion and the mode of its action have been investigated. Since the efficiency of a pancreatic extract is not destroyed by boiling it is clear that the internal secretion is not of the nature of an enzyme, but of more stable character.

The mode of the action of the internal secretion remained unsolved until a few years ago when Cohnheim found that, while neither pancreatic extract nor muscular extract alone is able to destroy sugar, the combination of both leads to a rapid glycolysis. The experiments of Cohnheim seem to indicate that the sugar destroying enzyme of the muscle and other body cells is converted from the form of an inactive zymogen into that of an active zymogen by the internal secretion of the pancreas, and that without the internal secretion the glycolytic zymogen remains inactive, hence the elimination of the sugar unoxidized.

While Cohnheim's interpretation of the role played by the internal secretion of the pancreas in the metabolism of sugar is accurate, Baumgarten has carried out some experiments which seem to indicate that the relation between the pancreas and glycolysis is not so simple as might be inferred from the 'original experiments of Cohnheim. Baumgarten found that while after pancreatectomy dextrose cannot be oxidized, its isomer laevulose can be burned. Gluconic acid, glycuronic acid and saccharic acid also can be utilized by pancreatectomized dogs. These observations might lead to the conclusion that after the initial oxidative changes have taken place the later cleavage processes can occur without the intervention of the internal secretion. At present the final word regarding the relation between the metabolism of sugar and the internal secretion of the pancreas cannot be spoken.

There are reasons for believing that the internal secretion of this organ is not restricted to an influence on carbolydrate metabolism. For example after pancreatectomy in the dog the liver is found to contain only traces of glycogen while the blood is hyper-glycaemic, and the lecuocytes, parenchyma of the kidney and other parts of the body normally containing small amounts of glycogen are loaded down with this substance. After complete deprivation of the internal secretion of the pancreas the liver loses the power of converting sugar into glycogen. Our conclusion must be that the internal secretion of the pancreas is necessary for the storage of glycogen by the liver.

That the internal secretion of the pancreas exerts a still further influence seems to be indicated by the findings of Lombroso that after pancreatectomy more fatty substances by far are excreted than are ingested, and that an animal from whom the pancreas is removed is unable to convert sugar into fat. We might seem justified in inferring that the internal secretion of the pancreas is necessary not only for the conversion of carbohydrate into fat but also for the normal metabolism of fat.

Another role played by the pancreas recently was brought to light by Sweet who showed that after pancreatectomy there is a great loss in bactericidal power. Probably this loss of bactericidal power explains the well known clinical observation that many diabetics show an increased tendency to infection.

Hanot some years ago called attention to the fact that in many cases of generalized haemochromatosis diabetes occurs, and on account of the coloration of the skin the term "bronzed diabetes" was applied. The pigmentation is not due to an icterus, but to an iron free compound of aromatic nature derived from the chromogenic radical of the protein molecule.

There is abundant evidence to show that the pigmentation and sclerotic changes precede the glycosuria which is secondary to the atrophic and sclerotic changes in the pancreas. The accumulation of pigment leads to degeneration of the containing cells and consequently interstitial inflammation notably of the liver and pancreas, and when the chronic interstitial pancreatitis reaches

a certain degree of intensity there is an interference with the production of the internal secretion of this organ, hence the pancreatic diabetes.

Pancreatic glycosuria may be recognized by studying the behaviour of laevulose in the body and the ratio between the dextrose and nitrogen (1:3) eliminated during starvation.

In the treatment of pancreatic glycosuria it seems to a physiologist that the possibility of supplying the internal secretion by engrafting peritoneally has not met with the clinical recognition which might be expected from the results obtained in animal experimentation.

Auditorium

RELATION OF GASTRO-INTESTINAL DISEASES TO THE PANCREAS.

BY L. G. VISSCHER, M.D., LOS ANGELES.

May it be not out of place, in this symposium, to consider the question: How can we diagnose pancreatic insufficiency or deficiency? Leaving the anatomical, topical, surgical part to others, we have to reach our conclusions by the study of missing functions. I will again not mention the disturbances of the internal secretions though the hayline destruction of Langerhans' islands, as has been covered by Drs. Zerfing and Stookey, but ask, is there demonstrable evidence of diminished or lacking amylo, proteo, and lipo-lytic activity?

We have a very interesting sign in the large, voluminous, pappy or compact stool, evacuated twice or three times a day, with indican in excess in the urine, and loss of weight of the patient, who does not show any other cause for his loss but non-assimilation. The examination of this stool shows abundance of neutral fat and fatty acids; undigested starch and meat fibers, with striae and nuclei preserved.

But this is not the rule. How do we hunt for signs of missing function?

First, deficient lipolysis, a very uncertain matter. Fat ingested, is absorbed according to its low melting point; stearin is passed out unchanged. But the combinations of glycerin with palmitic, oleic and butyric acid, which are the food fats, will be absorbed as they are introduced in emulsion form;

so are cream and some of the cod liver oil emulsions absorbed in cases of pancreatic destruction. Without now considering the debated question, whether fats have to be saponified or emulsified to be absorbed, the fact is that in a normal stool (and by normal stool I mean the stool after Schmidt test diet) only soap and calcium-fatacid is found; so that all appearance of fat in the stool to the naked eye proves either too large an intake, or too active peristalsis or unsufficient absorption by diseased intestinal villi—or finally, deficient pancreatic splitting.

The estimation by chemical analysis of the percentage of the fat residue is clinically impracticable. And so far as the appearance is concerned: What does a clay stool mean? A normal stool is brown due to reduced bilirubin. Infants' stools, which contains unreduced bilirubin, due to more active peristalsis and less bacterial reduction, are golden vellow (somewhat due to blending with milk as the exclusive diet.) The more active the peristalsis the lighter yellow the stool will be, as is shown during the administration of a saline purge. first black (carbonized or burned) stool, followed by dark urobilin stools and then by light yellow (bilirubin) bile stool.

A white, clay stool may be due to bile occlusion without undue fat percentage; second, to acholia, where there is neither bile secretion nor icterus, that is no bile formation; or third, to the presence of a peculiar reduction product of the bilirubin called by Nencki leuko urobilin. These stools get darker by exposure to light (oxidation). and finally, fourth, to the presence of abundant neutral fat.

In order to determine whether a clav stool contains bile or not, we add to it some diluted acid and heat, thereby splitting the soap; now extract wither ether, a good deal of fat is thereby removed, and if the stool contains bile, the residue will turn dark. Bile pigment is positively demonstrated by one of the routine stool tests: A concentrated bichlorid solution will turn a normal stool pink (hydro bilirubin) or greenish (bilirubin) and a stool without bile pigment therefore does not change in color. A very beautiful test is: Add HCL alcohol, shake, filter; add ammonia and zinc chloride; green fluores-cence showing bilirubin.

This part settled, how are we going about to prove that the clay stool is a fat stool? By microscope. Fat is found in three forms. First, earthy soap in flakes or short crystals or needles of yellow calcium salts. Second, long curved needles of free fatty acid. Third, drops of neutral fat. Now the appearance in the microscopical slide of any other forms but soap flakes and yellow needles is pathologic, and due to overfat diet, or jaundice or intestinal tuberculosis or amyloidosis or intense catarrhal enteritis or pancreatic insufficiency.

As to the pancreatic factor in this sign, Zoja means that the more strongly alkaline pancreatic juice is secreted, the more soap is made, and so does he conclude from the relation of the soap to the neutral fat and fatty acids to the presence or absence of pancreatic duct-occlusion.

Now another pancreatic scotom: deficient proteolysis. To demonstrate this in a concrete case, we would have to

go to a very much time consuming attempt of precipitating soluble albumen in the feces (which is normally not present) with acetic acid and showing it up by the biuret test (potash and copper sulphate.) The microscope again helps more. Since Schmidt demonstrated that the meat fibers in these abnormal stools will appear with the striae retained, with torn and rounded edges, with cellnuclei preserved. He advises to harden little pieces of meat in alcohol and sew them in a muslin bag and serve them to your patients (a funny way of eating mince pie!). Segregate the stool and examine under the microscope.

Indeed, if increased peristallis due to intestinal disease, and pronounced catarrh of the stomach can be excluded, this test is very helpful; only both Schmidt and Strassburger assert that almost total obstruction of the pancreatic duct or almost total degeneration of the pancreatic acini is necessary to bring about this condition of the stool.

I have not used Sahli's glutoid capsules (formaldehyded gelatin capsules containing iodoform) because I could not get them. If the iodine test with the urine or saliva appears later than 8 to 12 hours, or is totally absent, pancreatic proteolysis is proven to be deficient or absent (provided the stomach motolity be determined to be normal.)

The third hiatus in pancreatic function to be looked for is missing amylolysis. We find with the microscope in such a case abundance of starch granules, which, however, stain with iodine very slowly. Potato cells and oatmeal cells are duly announced after a Schmidt test diet. Further deduction can be made from the amount of gas formation. When there are no signs of stomach distention: When no gas can be removed from the stomach by natural or artificial means before or after meals, when salivary digestion is found sufficient we have to look for insufficient starch conversion by the pancreatic amylopsin or the succus entericus as the causative factor of "dead wind" or flatulence. A portion of stool put into a fermentation tube, proper temperature, shows early and late fermentation; the former, developing during twenty-four hours, being due to starch fermentation producing CO2, the later to proteid putrifaction. With these methods we may go out loaded for bear; no doubt we will see many tracks, but few claws or skins will adorn our offices!

Finally, a few remarks about the treatment; it is readily observed that if it were not because the thing is hollow, the pancreas well protected from injury and warmly tucked away, would lead a pretty healthy life to good old age. But it is here as elsewhere, everlastingly will pipes and tubes get dirty, stopped up, kinked or compressed: lacrymal ducts, eustachian tube, bronchi. esophagus, the whole bagpipe; stomach and bowels, then bile duct, pancreatic duct, blind appendix, Fallopian tube, ureter, urethra. And nothing but a plumber will do. Surgical help, as we will hear of for the rest of the evening. But when the ducts are open and the gland not degenerated but only inactive. potentially active, then we can stimulate pancreatic functions; not in dog or guinea pig I mean, but in one of our patients.

Indirectly in all cases of general asthenia by all hygienic, mechanic, hydriatic, electric measures at our command.

Further from clinical observation in surgical pancreatic fistula we have learned, that in order to close it, we must withhold carbohydrates from the dietary, as these foodstuffs increase the flow of pancreatic juice greatly. And it is also a matter of experience that where nutrition is down, the well-prepared starches and gruels have a fattening influence as long as the stomach

permits their introduction. We have in the carbohydrates therefore a physiological stimulus to pancreatic secretion. But where a pancreas can only produce so much juice, and of such cleaving activity as it is, we should not try to stimulate, but either utilize whatever is secreted by selecting as digestible a diet, by changing the medium in which it may do its work, and if possible by adding digestants. It is proven that the acidity of the duodenal contents stimulates pancreatic secretion which does not conflict with the fact that pancreatic juice is most active in alkalin medium.

The pancreatic secretion finds a long way to do good beyond the zone of the stomach, duodenal and jejunal acidity. That is one of the reasons why nitronuriatic acid does so much good in torpid liver, these chronic liverstases, as are found in tropical bon vivants: the pancreas is in a state of passive congestion, and the duodenum (and perhaps stomach) is catarrhal, inflamed: a mucus film covers the mucosa and prevents the acid stimulation. But where we cannot whip up the pancreas to more effort, we may through alkaline medication promote the activity of the succus pancreaticus as it is secreted. And we certainly may aid by the administration of pancreatic preparations, with alkali or in the form of pankreon, which is a tennate and only becomes active in alkaline medium without being previously destroyed by acid stomach secretion.

As to the fat absorption, may this be through emulsification or saponification, it is in fact that a bowel mucosa covered by a film of bile will absorb fat, better than without, which explains the good done by these preparations containing bile or bile acids together with pancreatic extracts.

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MECHANISM OF SHOCK IN ACUTE DISEASE OF THE PANCREAS.

BY JAMES T. FISHER, M.D., LOS ANGELES.

The mechanism of shock in acute disase of the pancreas does not differ in any considerable degree from that inluced by acute disease of other abdomnal organs, except that this important pland lies directly against a mass of nerve tissue, the semi-lunar ganglia and olar plexus. Irritation, through presure, causes a greater degree of shock and of a more lasting nature. No iritation known can produce such proound and lasting shock as acute emorrhagic effusion in the substance of the gland; a shock from which the atient rarely recovers. The pancreas s a retro-peritoneal organ, held firmly n place by the duodenum and the surounding peritoneum; it has little opcortunity to expand in any direction and when from acute disease or hemorhage its substance swells, it obviously mpinges upon and irritates the mass of sensitive nerve tissue, called the "ablominal brain."

From these sympathetic ganglia, the nsult is sent up through the sympahetic fibres to the cord and thence to he vaso-motor center in the medulla. This master center becomes either paralyzed or paretic, in proportion to the degree of irritation to the sympathetic centers below.

The function of the vaso-motor center is simply to control, through its dilator and constrictor fibres, the caliber of the blood vessels and to preserve Through irritation, the equilibrium of this important center is disturbed, the brake is taken off, the splanchnic vessels in particular become dilated, the venous system engorged and the patient bleeds to death in his own vessels.

The basic feature of shock is an acute anaemia, a pseudo death, the clinical picture depending upon a greater or less degree of irritation of the sympathetic nervous system. Certain organs and tissues are very much more likely to produce shock, when irritated, than others.

Certain tissues possess a very rich nerve supply. Injuries involving the diaphragm, and especially that part attached to the pericardeum, give rise to a relatively greater degree of shock than similar injuries elsewhere.

Injuries to the pylorus and upper end of the intestine produce considerable more shock than at the lower end of the alimentary tract.

EARLY SURGICAL INTERVENTION IN PANCREATIC DISEASES.

BY ANDREW STEWART LOBINGIER, A.B., M.D., LOS ANGELES.

The cardinal principle governing the surgery of the pancreas is early and effective drainage. It applies with equal cogency to injuries, infarcts, acute hemorrhagic and septic inclusions and to the complex involving obstruction in the choledochus, ampulla of Vater or ducts of Wirsung and Santorini.

Previous to Mayo Robson's classical lecture before the London Graduate

and Policlinic in 1900 the surgical pathology of the pancreas had been recognized chiefly in its acute parenchymatous destruction associated with hemorrhage and necrosis or by a few occasionally detected cysts or new growths mentioned chiefly as curiosities. less than eight years the surgery of the pancreas has been placed upon a secure footing. It is not forgotten that

Naunyn and Courvoisier on the continent and Reginald Fitz and Nicholas Senn in America contributed valuable studies to the literature of this hitherto obscure subject. In 1901 Opie had also shown in a brilliant series of experimental studies, suggested by observing a case with a small stone in the Vaterian ampulla, the malevolent effect of an irritating fluid such as bile forced backward into the pancreatic duct. Later Flexner confirmed these facts by further experimental work. But to Mr. Robson whose enormous experience in the surgery of the gall bladder and ducts has enabled him to speak with authority, belongs the credit of interpreting the associated pathology observed in the living subject, and between obstructive conditions within and surrounding the lower segment of the choledochus and the development of pancreatitis. These observations are finding general confirmation in the experiences of general surgeons throughout the world and where formerly very little on the subject of pancreatitis appeared in the literature, abundant reports are now available for comparative study.

It is clear from the testimony of the best experiences, that in early surgical intervention lies the hope of saving the pancreas from serious destructive change. This implies a quickened comprehension of the symptomatology of pancreatic inflammation and the boldness to interfere in time to save the gland from perishing. In acute pancreatitis, with or without the formation of a haematoma, the symptoms are sharp and typical, so that anyone of reasonable observation should be able to make a diagnosis. And although some confusion might exist between acute perforation of the duodenum or stomach, should the anamnesis fail to help in a differential diagnosis, the urgency of the situation would instantly appeal to the mind of the trained surgeon to operate without delay. There is every reason and unanimous authority for prompt operation in strangulation or threatened gangrene of the intestine. There is equal reason—even more emphatic—for preserving a gland as important as the pancreas from the fulminating necrosis which is absolutely certain to befall it in acute hemorrhagic infection. No less should be said of the importance of recognizing the early evidences of chronic inflammatory change before it becomes general fibrosis with a hopeless diabetes as a sequel.

There is a recognized classification of chronic inflammation which is known as interacinar, which is from the start practically hopeless. What we should study is the earliest symptom complex of chronic inflammation so that by removing the cause of the irritation which is producing the interstitial change it may be arrested.

Here again we are confronted with the apathy, which has passed for socalled conservatism, in the recognition of practically all the real conditions in the right hypochondrium. Internal medicine has much of glory to its credit; so much in fact that it should not forget how surgery has been glad to point the way and correct the time worn errors in the pathology of the stomach, duodenum and gall bladder. It is true that the surgeon has not been obliged to depend upon post mortem appearances on which to premise his conclusions, but has been able to study much of this pathology in the living subject, when the varying conditions and stages of degeneration could be noted and estimated at their precise value. Because he was not dependent upon dead room appearances on which to found his judgments, a material advantage has accrued to him and he has been able thus to illumine obscure fields whose pathology hitherto has been shadowed in doubt.

Except in catarrhal conditions, as is true of the bile ducts, the influences contributing to pancreatitis can be cor-

rected only by early resort to skillful and intelligent surgery. In order to achieve the highest results the labors of the internist, the pathologist and surceon should go hand in hand in perfect accord at the bedside, in the laboratory and operating room. If the surgeon has been first to recognize the true pathology of pancreatic disease, internal medicine and the laboratory have rendered invalnable assistance in detecting the definite tests and incipient symptomatic evidences of disease.

The treatment of gunshot and stab wounds of the pancreas and of acute or subacute pancreatitis either with hemorrhage or abscess must be prompt and radical. It consists of incision, careful protection of the peritoneum and abdominal viscera and adequate drainage. In wounds of the gland deep sutures of catgut should be used to close the rent and cigarette drains be carried down to the site of the repair. Given a subject with fair resistance and seen reasonably early the outcome will depend largely on the judgment and skill employed in drainage. The tumor which is clearly evident on opening the abdomen may be reached most easily as a rule through the gastro-hepatic ligament. In some cases it can be reached equally well through the gastro-colic ligament. A stab wound posterior through the vosto-vertebral angle in which rubber sheathed gauze drains are placed will give effective drainage after the blood or pus have been evacuated from the tumor. The same drainage should be carried out through the anterior wound. Blood should be carefully sponged from the right pararenal space and from the omental bursa and should purulent leakage have occurred, cigarette drains should be carried into the para-renal pouch.

It need not be urged here how important it is that acute pancreatitis should never be permitted to pass on to a state of septic phlegmon. For still more imminent than abscess of the pancreas following acute inflammation and hemorrhage, is dissolution itself, the impending and appalling sequel to the rapid necrosis of this gland where surgical interference is delayed beyond a few hours.

Surgical interference in subacute pancreatitis does not differ essentially from that in the acute form since it is in a large degree but a milder and more slowly developing form of acute invasion. Its greater liability to form abscess and adhesions means that its toxic and destructive virulence is less marked than the type associated with gross necrosis.

Chronic pancreatitis which in the early history of the studies of this gland was considered a rare affection, is now recognized as the most common of all conditions affecting it. Since its pathology, as has been already shown, is intimately associated with that of the lower segment of the choledochus or may be a sequel of infective cholangitis, gastric or duodenal ulcer, calculus obstruction of the ducts of Wirsung or Santorini or of a catarrhal condition of the duodenum and ampulla it must be apparent that in the correction of these various lesions lies a rational prophylaxis against chronic interstitial change in the pancreas itself. Opie has noted the hyaline degeneration which may occur in the islands of Langerhans and the association with it of glycosuria. The same author has called attention to the frequency of occurrence of chronic pancreatitis in alcoholics and its association with cirrhosis of the liver, Hausemann, Lefas, Dieckhoff, Friedreich and Oser have made similar observations.

Mr. Robson has shown by a long series of cases that the most effective treatment of this condition is by indirect drainage. In a case of obstruction of the pancreatic ducts by concretions the drainage is accomplished by a duodenocholedochotomy. In one instance he has withdrawn concretions

with fine forceps from some distance up the duct of Wirsung.

But it is chiefly through drainage of the gall bladder or of the common duct if constricted or obstructed that the most marked benefit is to be expected in the resolution or arrest of chronic pancreatitis.

Mr. Robson found that many cases of enlarged head of the pancreas simulating cancer and such cases as had undoubtedly hitherto been frequently given up as malignant and hopeless, were promptly relieved by cholecystostomy.

Mayo has reported a number of cases of choledochectomy, in cases where the gall bladder had either perished or had been removed, in which the bile circulation was re-established either directly by the restored common duct through the pancreatic groove or by an anastamosis of the common duct into the upper segment of the duodenum.

It has been generally recognized, since the relation of diseases of the gall ducts to the production of chronic pancreatitis was clearly understood, that earlier relief to gall stone disease must be taught and accepted before great progress could be made in the prevention of interstitial pancreatitis, singular that cirrhosis of the pancreas should have received attention so tardily when a similar pathology of the liver and kidneys have so long engaged the widest interest and study. If the pancreas is to be preserved from the insidious and certain interstitial change which commonly attends prolonged regurgitation of irritating fluids and bacteria along its ducts, the doctrine of expectant treatment in gall stone disease and in ulcerative conditions in the duodenum and stomach should be confined to exceedingly restricted limits. I am not prepared to urge anything more radical than has been presented in the views laid down in the papers of the evening. If such sound doctrine were iollowed conscientiously; if the careful analysis of symptoms and history were made in each patient suffering from digestive disturbances; if the discharges and secretions were critically and repeatedly examined in every case with a suggestive complex, the general surgeon would not so often be invited to deal with hopeless conditions in the pancreas and associated structures in the upper abdomen.

THE RELATION BETWEEN CHOLELITHIASIS AND SUR-GERY OF THE PANCREAS.

BY WILLIAM A. EDWARDS, M.D., LOS ANGELES, CAL., PROFESSOR OF PAEDIATRICS, COLLEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA.

When one endeavors to sift the literature of the last few years the thought that the phraseology is misleading at once occurs to him and as he reads further he is convinced that the terms "Diseases of the Gall Bladder and "Gall Stone Disease" are very misleading and tell but a very small part of the story. The word that has crept into the literature—Cholelithiasis, is more misleading. It tells even less of the whole condition. Cholelithiasis is but one manifestation, of course an important one, of the disease. That we are dealing with

disease of the bile passages, or a complex system of passages, seems to have been overlooked. For example, when one uses the term, Cholelithiasis, he should remember that it represents often a very complex series of pathological changes, infection, inflammation, calculus, suppuration, attendant ulceration, a resulting cicatrization and a final stenosis. On the other hand the sequence after infection may be perforation, fistula, adhesions, local or general peritonitis and the involvement of other

organs or malignant changes in situ, or in contiguous structures.

Therefore, the many titled diseases, that have been confusing the practitioner in the newer nomenclature, resolve themselves into the one basal condition—an infection. We are not all agreed upon the methods of infection, but no clinician should fail to keep in touch with the research laboratory of today.

Certain facts seem to be established: The most common agent is the colon bacillus, next the bacillus typhosis. The mode of entrance is either through the blood current or through the ducts, upward from the intestine. The latter is undoubtedly the most common method and the one to be remembered in everyday work; of course it is understood that stagnation of bile is essential to gall stone formation, but it must be plain to all of us that bacterial invasion causes swelling of the mucosa in the ducts. stagnation, and therefore a precipitation of cholestrin from the epithelial cells. Now, the stone commences to form and the vicious circle is started thus: the stones themselves act as an irritant, the irritated mucosa furnishes a lodgment for more organisms, more swelling and more precipitation of cholestrin follows and the stones grow. Fresh bile in a healthy subject certainly does not act as an antiseptic; the most we can expect of it is to be sterile, but it may act as a culture medium and it is a fact that in the lower part of the common duct the colon bacillus is commonly found. In studying the class of cases under consideration tonight we must constantly bear in mind the presence of a catarrh of the billiary passages and that the actual stones are not worthy of prime consideration, except under certain circumstances. With the acute forms of infection we have little to do in tonight's discussion as they rarely result in stone formation, while they are grave and interesting conditions, we must perforce dismiss them in this study. A chronic indolent catarrh is that which has to do with Cholelithiasis and the practitioner must remember that the time that may elapse from the first or primary infection of the gall ducts and the actual formation of stone may be many months or even years and that catarrh in these passages is much like catarrh in any other mucous membrane; that is first, micro-organisms, then congestion followed by exudation and desquamation.

With this knowledge, then, let us remember the close relation of the common duct with the pancreas, a relation so close that in 95 per cent of all individuals it passes through the substances of the pancreas. Very rarely it passes over the head of the pancreas. When within the gland it is very firmly imbedded. In about 93 per cent the pancreatic duct will open independently into the ampulla of Vater, within the substance of the wall of the duodenum. These are the pertinent facts in studying the relation that we are asked to consider.

That part of the common duct within the pancreas is as inelastic as the prostatic urethra, hence inflammation quickly leads to stasis and daming backward. Stones and mucous pass this portion of the duct only with the greatest difficulty, if they do pass they will probably become lodged in the ampulla, retained by its narrow outlet into the intestine and here we have the key to the relation of Cholelithiasis to disease of the pancreas. When the stones become impacted in the ampulla, unless very large they will lie below the separate openings of the duct of Wirsung, or pancreatic duct, and the This will allow discommon duct. charges from the liver and the pancreas to mingle above the opening in the ampulla itself, so that bile may be forced into the pancreatic passage or in time the pancreatic secretions may find their way up through the bile ducts toward or even into the liver. The anatomical arrangement of the ampulla of Vater and the termination of the common bile duct and pancreatic duct are subject to many variations, all of which have very definite relation to disease of the pancreas, some of them by this arrangement seeming to deliberately invite a biliary infection in the pancreas. In about 31 per cent of all individuals the duct of Sanborini cannot be relied upon to supplement the duct of Wirsung.

Every man accustomed to study his cases knows that stones rarely completely and permanently plug the common duct; they are aptly called Fenger's "floaters." Opie has shown that the secretions undoubtedly do mingle, which explains the brilliant results of drainage of the pancreas by performing a Cholecystostomy.

There can, however, be no question that the great majority of diseases of the bile passages and of the pancreas may be greatly relieved, indeed, apparently cured by internal treatment. small number, probably about 10 per cent, do not recover under internal treatment: these are the cases that, owing to extensive tissue changes, and the lodgment of gallstones, require surgical relief. When we come to study the literature of the diseases of the pancreas two thoughts will at once occur to us, first, that at present most of the knowledge of these diseases is accidental, and secondly, that still, even to those who pretend to superior skill and knowledge, the diagnosis of diseases of the pancreas is a very difficult problem. This in my experience is due to the fact that no matter how careful our study, the pancreas can rarely be made the central or doininating factor in a symptom complex. The reason for this has seemed to me to be the anatomical seat of the gland and its close relation to many important contiguous organs and structures, which in turn stamp their symptomology upon the diseased gland.

In spite of our lack of knowledge, the great relief that has occurred after accidental operations on the pancreas makes it our duty to inform ourselves of the possibility of deliberate surgical intervention. It is my province to consider alone the relation of Cholelithiasis to

pancreatic disease. This limits us to three conditions:

First: Hemorrhage into the pancreas, which is more often an acute pancreatitis, and if the individual survives is followed by abscess, gangrene and death. I have seen but two such cases, one in Philadelphia in a medical friend, and one in Los Angeles through the courtesy of Dr. King and Dr. Lasher.

Second: Infection from the pancreatic duct which in turn receives its infection from the common bile duct. This at the present time is the most frequently recorded type of pancreatic disease.

Third: Chronic interstitial pancreatitis, involving the lobules or the acini of the gland. These are the cases due to long standing inflammatory conditions in the ducts and possibly to the general condition that produces interstitial changes in other organs.

As the diagnosis of all these conditions is so difficult it is the surgeon's duty to bear in mind the possibility of their existence and search for them. If he finds definite areas of fat necrosis he may consider that he is in the presence of a pancreatic disease, not of course mistaking fat necrosis for tubercular or cancerous nodules. The relation of fat necrosis to disease of the pancreas is not absolute, but its presence is a symptom of paramount importance and demands a careful inspection of the pancreas. Fat necrosis from acute pancreatitis is unattended by increased leucocytosis, acute infective cholangitis has a marked leucocvtosis.

Time will allow me to consider but two forms of pancreatic disease, that is an acute pancreatitis, usually associated with gallstones in the bile ducts, and chronic interstitial pancreatitis, a sequel of the first.

We have already called attention to Opie's statement that pancreatic inflammation is due to backward flowing of bile into Wirsing's duct. Opie's conclusions are in the main from animal experimentation, but surgeons have record-

ed similar conditions, with and without gallstones in the common duct, and the conclusion is that the pancreas may become infected in a number of ways, both direct and by lymphatic infection. Practically it teaches us the lesson that gallstones are a menace to health and even life by their possibility of producing acute pancreatitis, which is usually fatal.

All of us agree that inflammatory disease of the pancreas, either acute or chronic, is seen most frequently in association with gallstones. Finally we come to the consideration of chronic interstitial pancreatitis which perhaps presents the most encouraging field from the patient's point of view. These are the cases where the indefinite symptoms make us think of bile duct disease and for the most part they have come to operation with this diagnosis. often no stones are found, but instead the pancreas is seen to be enlarged, cirrhotic and constricting the common bile duct. Jaundice is a frequent symptom and to the general practitioner a very misleading indication. If stones are not present the gall bladder may be enlarged or contracted.

The hardened head of the pancreas has been frequently considered to be malignant and nothing being done the recovery of the patient has proven the error in diagnosis.

The operation that has proven of such

signal service in chronic pancreatitis is gall bladder drainage, with or without an anastomosis between the gall bladder and the duodenum; although this latter procedure is now falling into disuse.

Just what happens in these cases of drainage of the gall bladder in pancreatic disease we do not know, but we do know that the results are often most brilliant.

In conclusion I wish to offer this quotation from Mumford—"The pancreas, the liver and ducts, and the stomach hang like three apples on a stem—the duodenum. Whatever affects one often affects the others. All are organs of digestion, but of them all the pancreas physiologically is by far the most important for purposes of digestion.

"One can live without a stomach, one can even live without the bile of the liver, but we have reason to believe that one cannot live long without the pancreas.

"So it is a shrewd provision of nature that the pancreas is so placed and guarded as infrequently to be the subject of disease or injury. And, it is a delicate organ structurally—easily damaged by violence, whenever violence may reach it; gravely infected when infective agents penetrate its depth; and when diseased a potent menace to health and to life."

PUBLIC HEALTH WORK AND THE MEDICAL PROFESSION.*

BY GEORGE H. KRESS, B.S., M.D., LOS ANGELES, CAL. ADJUNCT PROFESSOR OF HYGIENE AND STATE MEDICINE, COLLEGE OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

If public health work is to be carried on scientifically and systematically, it must be under the supervision of persons who understand public health needs. The medical profession, through knowledge and training, is in a position to claim for itself the capacity to act more intelligently in the solution of the many public health problems which confront our present day civilization than any other group of citizens. This being the case, it becomes understandable at once, that if we are to be truly conscientious and altruistic citizens, it be-

^{*}Address by invitation, delivered before the Long Beach Branch of the Los Angeles County Medical Association, at Long Beach, California, December 12, 1907.

comes the duty of every physician to do more in the solution of public health work than may be fairly expected of laymen.

Are the members of the medical profession fully conscious of these public health responsibilities? The answer nearly always may be truthfully said to be yes.

Are, on the other hand, the results obtained by us, in public health work, commensurate with our own recognition of these responsibilities? Here, unfortunately, the answer must only too often be in the negative.

Yet today, there is less excuse for us as medical men, to be derelict or laggard in our work in behalf of the public health than ever before. For with the founding of the science of bacteriology and the more exact and broader conception it gave us of the widespread and dangerous infectious diseases, we were placed in the position of intelligent persons who both knew the causes of and the methods of prevention of many of the world's great scourges, and yet, who for one reason or another, failed to do away with such preventable illness and death.

Note, by way of contrast to the comparative indifference displayed toward the prevention of dangerous infectious diseases, the pains we take to guard human life from the onslaught of the vicious citizen, who through bad heredity or worse environments, sees no particular wrong in going out on the highway and robbing his fellow-man of his purse, or if resistance be offered, of shooting down his victim in cold blood. For the comparatively few of such undesirable citizens, we have courts and jails and prisons and guards, all maintained at enormous expense in dollars and cents. And after all for what purpose? Is not all this legal and other machinery of what we call the courts of justice, an actuality because of the high and sacred value we place upon human rights and upon human life?

In contemplating all the machinery of this sort which is existant, so that male-factors of our modern laws may be punished, is it not a most glaring inconsistency in both the philosophy and in the mode of life of today, that being acquainted with the causes thereof, we yet fail to honestly concern ourselves over the awful annual slaughter of the thousands and thousands of lives which are unnecessarily blotted out through preventable diseases? Why all the legal machinery for one class of human slaughter and none for the other?

Why? Because the medical profes-

sion, and more particularly, because you and I and each and all of us have failed to do our adequate parts in deeds, in carrying out the dictates of our minds and hearts, to the end of so cultivating and leading an enlightened professional and lay sentiment concerning public health matters, that this sentiment once aroused, would immediately insist that the State take steps to properly solve as many as possible of the numerous public health problems having an intimate connection with human illness and death. These problems confront every commonwealth of this Union, ves, they may be said to confront every city, town, hamlet and country district of every State of our land-the problems differing merely in degree at different times and places, but bad, far too bad, almost everywhere.

In other words, we members of a profession, which more than any other does heroic service in the alleviation and prevention of human suffering and death, but who at the same time, like all other members of the body politic must be judged by what we ought and should, rather than what we actually do, this profession—our profession—must stand adjudged as guilty of much loss of life, in that what we accomplish is not in proportion to that which our much

greater knowledge of these problems should produce through us.

I yield to no man in the high regard I feel toward the members of the medical profession and their generous labors, nor in the pride I take as being a member of this ancient and honorable guild. I must confess, however, if we are to judge from the standard that those who know most shall give most largely in return, then in my own mind, at least, the public health work actually accomplished through the medical profession falls far short of what it should.

Now, why is this? It is not fair to explain this delinquency by claiming that as individual physicians, we are indifferent to our trusts. For it is well known that the laity, ridicule as it may, our profession as such, is ever ready to give testimony to the goodness of heart and generosity of individual doctors. It may, in fact, be taken as an accepted truth, that as individuals, we medical men occupy in the hearts and minds of our individual patients and friends, perhaps a more kindly place than falls to the lot of any other profession.

Where, then, lies our fault? The answer must be found in our lack of union as a professional whole and in the unfortunate mode of professional life, which makes us flaunt unnecessarily before the public, our scientific disagreements, (disagreements which the lay mind through lack of knowledge, is not prepared to understand,) or, more unfortunately perhaps, in our personal animosities, (which the lay mind has been taught to understand only too well) so that the public has ceased to give to us or to recognize in us as a professional whole, that capacity and zeal for public health work, which is actually existent within us.

In fact, the trouble is that we have been flaunting our dirty professional and personal linen in the eyes of the public for so long a time that it has

become disgusted with both it and us. As a result, when we occasionally do get together and present a united front for the ends we would attain, the spectacle is so unusual, that the laity having vividly in mind our reputation for discord and bickerings, spends its time trying to conjure up the sordid motives that could have brought us together in such united fashion, instead of giving to us the allegiance and support we seek. Disgusted by this lack of support from the laity and by the discontent and criticism of fellow-members, whose lukewarm efforts are almost worse than nothing, we proceed at once to fall back into our old slough of despond and despair, to become again followers of the doctrine of "let well enough alone."

Now, all this is very unlike what it should be. A profession such as ours, composed of the material which it has within itself, should give a far different account of itself. Instead of being buffeted from pillar to post in national, state, county and city affairs concerned with the public health, our standing with the public and with our political rulers should be such, that in all such matters, the opinions of our profession should be sought and acted upon.

The opinion of our profession will not be sought and acted upon, however, until you and I, and until all of us together, with our lay friends supporting us, stand shoulder to shoulder and give expression to the generous impulses existent in each of us, to the end that the physical lot and lives of our fellow men may be bettered and prolonged.

What now, are some of the conditions concerning which we should educate the public? Among such may be mentioned pure air, not only for country or city park, but for city home and factory; pure food, to be for sale everywhere, and impure food for sale nowhere; sanitary habitations and workshops for all of us; decent and fair hours of labor, especially for him who

is the under-man; hygienic and moral modes of living at every hand; state supervision and control of illness-producing and death-spreading infectious diseases—these are some of the public health needs you and I are interested in, are a few of the public health needs, you and I would fain battle for, and yet public health needs of our fellows which we will hardly see immediately realized and attained.

For you and I, although knowing that these needs, to be realized, must be favorably acted upon by our political rulers, fail to appreciate the necessity of adapting ourselves and our methods to the political system under which we live. And yet only by so doing and by presenting a united front, with an enlightened public sentiment supporting us, will our political rulers be glad to give us that, which we as medical men and as the natural guardians of the public health of the community, have a right to demand.

In other words, my colleagues, we lack common-sense in that we do not adapt ourselves to the conditions which are, prefering rather to philosophize on what they should be. For our political system is not a theory, but a fact and a situation.

The price we pay to this theorizing, what is it? It is found in the untold hours of physical suffering, in the economic loss to untold hundreds, and in the unnecessary slaughter of human life, running into the thousands. We may attempt to shift this responsibility to others, but the effort is an evasion, pure and simple.

If you are convinced that impure milk, for instance, is the cause of the death of say, one hundred infants in this county yearly, does it not become your duty and my duty, to preach in season and out of season, on the great and real danger of an impure milk supply to our infant and invalid populations and to suggest remedies that would re-

sult in the production of a safe milk?

If one hundred human lives were annually snuffed out in this county by highwaymen, with pistol or dagger as weapon, would you sit idly by and say or do nothing?

Can there be any ethical difference between what should be one's sense of responsibility in the two cases?

Anything and everything then, which makes for the conservation of health and the security of human life are items in which you and I are vitally interested, for life lost unnecessarily through preventable illness brought on by conditions which we know could and should be remedied, is in the ethical sense, murder, no less than which we call murder when one human being takes the life of another, with weapon such as pistol, knife or poison, that come within the pale of what we call the law.

The only difference is that in the first case, we all of us shift the responsibility, by imagining that it was some other man or men's business to rectify the faulty hygienic conditions, or more often, by not even imagining or thinking anything at all; while in the second case, what we call human society, (the same body politic, by the way, as before, only now acting through authorized elected or appointed agents). attempts to punish, ofttimes in most clumsy, illogical or brutal fashion, him whom we have been educated to construe as a criminal and as an enemy of society.

What we need to tell ourselves more often than we do, is that each and everyone of us, is partly responsible for these deaths from unnecessary and preventable diseases. This will then incite us to unload some of the responsibility on our lay fellows, and finally when by this method of education, both profession and laity are aroused, there need be but little question but that adequate action will be taken and that our public

health problems will be happily solved. When that spirit is instilled, and here in your own community the leadership and responsibility in and for this education and cultivation of public health needs must be on this Society and its members—when that time comes, there should be but little doubt that you and your fellow citizens will work hand in hand for pure air, for the air of the ocean and mountains unpolluted by noxious gases or smoke, for pure air and lots of it, and we obtain most of it when we have wide streets, parks, playgrounds and roomy houses and workshops; for pure food, whether it be clean milk drawn from healthy cattle under clean surroundings, received in clean receptacles and kept clean and sweet until it reaches the consumer, or whether it be meats from slaughtered cattle properly inspected before death in sanitary slaughter houses, or again whether it be unadulterated canned, baked or other food-stuffs sold over the counter of bakery or grocery; for sanitary habitations in which there are sufficient windows to allow of adequate reception of air and sunlight, as well as for workshops, provided with hygienic conveniences and proper amount of air space per workman, and also with protection from dangerous dusts or treacherous machinery; for decent and fair hours of labor, so that neither man, woman nor child shall be forced to slave and benumb both body and soul in order to keep the physical self together; for hygienic and moral modes of living everywhere, so that on all sides, the people will realize and demand a pure atmosphere, both inside and outside their houses, demand pure foods, pure water, sanitary disposal of sewage and be willing to live lives of moderation in eating, drinking, sleeping, work and recreation, avoiding vicious habits and surroundings, which often fasten the untold horrors of awful diseases, not only on self, but on wife and

child, and even on children's children; for State supervision and control of illness-producing and death-spreading infectious diseases, such as smallpox, the mortality of which can be rendered almost nil by vaccination, or of tuberculosis, which can be overcome through compulsory registration and fumigation and attention to the modes of living previously enumerated, or of the dread bubonic plague, the spread of which can be prevented if we will but rid our cities of the filth conditions in which rats and other rodents live, or of diphtheria, the mortality of which has been greatly lessened through antitoxin, and its spread as well as that of kindred diseases such as scarlet fever, much miminized through proper quarantine and fumigation measures-yes, when the spirit is instilled in us as medical men and through us, to the laity, to work more strenuously than we do for these ends, then may we as a profession, begin to really be somewhat content with our labors and say to ourselves, "There are many things still to be done, but much of the work has already been inaugurated or accomplished."

Until that time arrives, let us not rest. Though the problems which face us be great in number and the energy needed for their solution large in amount, we need not be discouraged. For each problem, when analyzed from the standpoint of cause and effect, resolves itself almost at once into certain definite lines of procedure. The task before us is to bring into being, the forces that will work with least resistance along these definite lines. These forces will come from the whole people, but they must be directed by trained and intelligent leaders and these trained and intelligent leaders are none other than the members of the medical profession.

These are some of the reasons why, my colleagues, you and I are interested in the relationship of our profession to the attainment of the public health needs of this community in which we live.

602 Johnson Building.



A MEDICAL, CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE,
Established in 1886 by
WALTER LINDLEY, M.D., LL.D., Editor and Publisher.

WALTER LINDLEY, M.D., LL.D., Editor and Publisher. This journal endeavors to mirror the progress of the profession of California, Arizona and New Mexico.

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EDITOR SOUTHERN CALIFORNIA PRACTITIONER.
Subscription Price, per annum, \$1.00.

1414 South Hope Street, Los Angeles, California.

EDITORIAL

DR. W. W. BECKETT ELECTED PRESIDENT OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Dr. Wesley Wilbur Beckett of Los Angeles, a likeness of whom is presented as the frontispiece of this issue of the Practitioner, was elected president of the Medical Society of the State of California at its recent meeting at Coronado. This is an honor in which not only Dr. Beckett, but all California south of Tehachepi may take pride. The action of the Society was certainly a most pleasing recognition, not only of the southern part of the state but of one of our colleagues who has long been among us and who has endeared himself to us through his courtesy and professional ability and attainments.

Dr. Beckett was born in Oregon, his parents having crossed the plains in 1849. His education was acquired in California. Prior to his entrance into medicine he taught school for six years at San Luis Obispo, being deputy superintendent of schools at the same time. His medical education was begun at Cooper Medical College in San Francisco, but was completed at Los Angeles, he being a member of the first class of 1888 of the College of Medicine, U. S. C., which class of eight members, by the way, in the person of Dr. H. Bert Ellis, has the honor also of an expresident of the State Society.

Dr. Beckett's professional career in Los Angeles has been a strenuous one and today he is known as one of our most representative surgeons. In addition to his private practice he holds the chair of professor of gynecology in the College of Medicine of the University of Southern California. In former years

K.

he has been president of the Southern California Medical Society, of the Los Angeles County Medical Association and of the Los Angeles Clinical and Pathological Society, which positions he filled with much credit to himself and to the organizations which so honored him.

It is not necessary to introduce him to his friends in the South. To our colleagues in the North, we can only say that a man has been selected as president who will do honor to the Society and himself in the important position to which he has been elected. We bespeak for him the co-operation of the entire state, in his efforts to do his part in placing our Society on an even higher plane than that which it now occupies.

TWO IMPORTANT MEETINGS OF MEDICAL EDUCATORS.

It was our privilege to recently attend the annual meeting of the Association of American Medical Colleges at Cleveland, Ohio, and the conference of the Council on Medical Education of the American Medical Association at Chicago, Ill.

At the Association meeting the requirements for admission into medical colleges were not changed, other than to present a schedule of required and optional units in which the individual studies were itemized in some detail. In order, also, to conform to the New York, Pennsylvania and other eastern states requirements, the required points were reduced from 18 to 16 and the optional points raised from 12 to 14, these changes being effected by requiring only two points in science instead of four.

The other important work transacted

by the Association was the consideration of the subjects of minimum equipment and minimum courses in the studies of the first two years. Tentative reports were offered on these topics, but final adoption was deferred until next year, in order that the syllabi might be more exact.

The adoption of such standards of equipment and syllabi for the primary or laboratory branches of anatomy, physiology, chemistry, bacteriology, pathology and pharmacology will supply a long-felt need to state examining boards and to medical colleges and is bound to bring about a much greater uniformity of curricula than now exists. We doubt not but that the adoption of these standards will be powerful factors in raising the tone of medical teaching in our country.

The Association did not discuss any increase in the requirements on preliminary education, the general opinion seeming to be that the four-year high school course, if rigidly and everywhere enforced, as in our liberal arts colleges and universities, would also be sufficient to answer the needs of our medical schools. The point was also made, that if the four-year high school course was not adequate, it could be made so without requiring the student to spend an additional year of time in school, by having our high and preparatory schools offer pre-medical or pre-scientific courses in which could be included the instruction in physics, chemistry, biology and one modern language, which medical colleges desire so much to have their freshmen students obtain prior to their admission.

At the meeting of the Council on Med-

ical Education some most excellent papers were presented, the charts showing the status of medical education at home and abroad being of especial interest. This meeting was largely of an advisory nature and yet the attendance was most representative and the discussions stimulating. The Council reported most encouraging progress in its work of having the subjects enumerated in the previous paragraph included in the preliminary requirements demanded. The papers read will appear in full in the Journal A. M. A. and should be read by all who are interested in the advancement of medical standards and knowledge. K.

THE APRIL STATE MEDICAL BOARD EXAMINATION.

Our attention has been called, from a number of sources, to the questions asked at the recent meeting of the California State Board of Medical Examiners and we have heard a considerable amount of criticism thereon.

The lot of the state board examiner is certainly a difficult one. The money compensation is not an adequate return for the time and thought given to the work, and the least mistake of judgment brings down upon the members of the board no end of censure. We sympathize with the gentlemen who have the honor to represent the different schools on the board, we are convinced that they are conscientious in their aims, but we are tempted to confess that sometimes we believe mistakes have been made.

The criticism we have heard of the recent examination was that it was too technical or **theoretical**, rather than

practical, and that it called for too much knowledge on topics which have as vet appeared not in our books, but only in the periodical literature. The claim is made that with an average of 75 per cent demanded, and no rating of less than 60 per cent in any one subject, the character of some of the questions was not altogether fair, particularly to older practitioners who have been off the benches for some time. From a superficial review of the questions, which appear elsewhere in this issue of the PRACTITIONER, we are tempted to believe that there is some justice in the criticism.

In a spirit therefore of real friendship for the board and as coming from a thorough believer in our state law and in high standards for the profession, we commend to the careful thought of the members of that body, the following excerpt, taken from Section 6 of the Law, to-wit, "The examination shall be practical in character and designed to discover the applicant's fitness to practice his profession.

We would emphasize the fact that the State's right to demand an examination of physicians is limited to a "fair," i.e., a practical examination, and that anything beyond, is an infringement of individual liberty and unconstitutional. In other words, the law does not intend and in fact does not allow any examination other than a "practical" one.

To our mind, every member of the Board would do well, when he makes up his examination list, to repeat the excerpt just quoted to himself after reading his various questions. It would be well also for him to put a number of

other queries to himself, but into these we will not go at this time.

The great state of California, in passing the present medical law, did so in order to keep out incompetents. It has the constitutional right to do this, because it is one of the police duties of every state to safeguard the health and lives of its citizens. An incompetent physician is a menace to the health and lives of the people, therefore he should not be allowed to practice.

But while all this is so, the fact remains that a physician might not be able to explain in detail all about some of the newer theories in medicine, such as vaccines, for instance, and yet be far from an incompetent physician. If, therefore, too many questions on theories still in dispute appear in the examination lists, competent men are very apt to be plucked, and not only be branded with the stigma of incompetency, but be put to very serious financial and other loss as a consequence. This would be an injustice not contempiated by, and in our opinion, not permitted by the present law, except by perversion and exaggeration of meaning and scope.

The very fact that a man takes a state board examination shows that he wants to do the right thing, that he wants to ally himself with the ethical profession. If such a man, in an examination that shall be practical in character and designed to discover the applicant's fitness to practice his profession, shows unfitness in the way he answers the questions in the said practical examination, then let him be plucked, to try again if he will, later on, and if in the meantime such applicant sets up a great

wail and noise, let him wail. Under such conditions, he is a true incompetent, and deserves to be plucked.

But let us be ourselves always sure. gentlemen, that we are giving fair and practical examinations. The domain of medicine and surgery is certainly great enough to allow ten good questions to be found in each of the ten subjects demanded by our state law, without going out after theories and will-o'-thewisps, that may be forgotten in a few years, and which certainly, if used in excess, cannot be claimed to be tests of a practical examination.

And let us remember one other thing, gentlemen, and that is this: In view of the fact that there are in California several hundreds of out and out practitioners who are practising without a license and who throw down the gauntlet of defiance to your Board and to the profession, it is most dreadfully inconsistent at this time, and while these things exist to show our very high standards by giving "impractical" questions to men and women who want to be licensed practitioners, and who so signify their desire to ally themselves with the legitimate and ethical profession.

RECENT CORONADO MEETING OF THE MEDICAL SOCIETY OF THE STATE. CALIFORNIA.

Elsewhere in this issue we print, as a matter of historical record, the program of the papers read at the recent meeting of the State Medical Society. It will be seen therefrom that both the scientific and social aims of the association were well looked after. The attendance was good and yet there should

have been a larger turn-out from the South than was present. Fleet week, however, was responsible no doubt for a considerable amount of non-attendance.

A southern man was elected to the presidency. It behooves us all, on that account, to resolve to attend next year's meeting, which will be held on April 21st, 22d and 23d at San Jose. A large turn-out from the South at San Jose is the least we can do to show our appreciation of the honor done us, in the election of Dr. Beckett to the presidency.

The program this year was good. In this as in past years, there are some changes we would have made, but we have given expression to them on other occasions and will not repeat them now.

One point, however, we would emphasize and that is this: The State Society exists because such an organization is needed if medical standards and aims are to be properly maintained in California. The scientific programs are very essential and vital parts of the meetings. These programs should be arranged with care, not only to be interesting to those who regularly attend the Society, but especially to be an incentive for attendance to those members who are usually prominent by their absence. This means that the programs must not become ultra-scientific or abstract. The papers should keep us in touch with the best in recent researches. but they should also be practical, because the Society is largely made up not of specialists, but of general practitioners. And the most urgent need of the Society is not to discuss abstract scientific subjects, but to get in touch with the general practitioners whose membership and influence is so greatly needed, but who have in the last three years shown little or no inclination to affiliate with the Society. So let the program be adapted largely to general medicine and surgery, with sections if necessary on the specialties and pure science, if desired, but not at the expense of the Society's welfare as a whole.

These matters, we are certain, will be carefully considered by the committee on program, on which Dr. C. Van Zwalenburg of Riverside is the representative from the South. • K.

THE VISIT OF PROFESSOR AUGUST MARTIN OF BERLIN.

It is with pleasure we record the recent visit to our city of Professor August Martin, of Berlin. In 1891 the writer had the pleasure of visiting Berlin, with the late Professor Theophilus Parvin, being entertained by Dr. Martin, and having the freedom of his private hospital and clinics. At that time Schauta, Duhrssen and Mackenrodt were his assistants. At the dinners given in honor of Professor Parvin, we had the pleasure of meeting all the prominent gynecologists and obstetricians of Berlin as well as prominent visiting surgeons from Russia, Austria and France. We listened to the teachings of Olshausen, Gusserow, Langenburg, Veit, Landau and others, but I was impressed that August Martin was the greatest teacher of them all. His teaching was based upon pathological findings, every case being carefully studied by himself and his assistants. He is the most dextrous operator I ever saw use a needle, seldom if ever using an artery clamp, except to fix the protecting towels. In his operative work he ligates as he cuts and no bruised tissues are left to cause after disturbances. The development of abdominal operations by the vaginal route are due greatly to his teaching. He advocated the dorsal position; vaginal drainage when pus was present, or oozing hemorrhage occurred; vaginal hysterectomy for fibroids or cancer of the uterus; vaginal fixation for retroflexion, or retroversion and prolapse. His students have elaborated his teachings and the

principles he advocated will long outlive himself. At this time he was a Privat-Docent, yet his clinics were more largely attended than those of Olshausen at the Frauenklinik where Martin's father formerly taught. Martin later became Professor at Erlangen and Griefswald, but has returned to private practice in Berlin where he is highly esteemed and respected. His mind is as great as his body, and his kindness and generosity exceed all bounds.

T. G. D.

EDITORIAL NOTES

Dr. Nicholas Senn was the author of twenty-three published works.

Dr. H. V. Clymer of Yuma recently had an exciting runaway but escaped with a few painful bruises.

Dr. S. S. Wood of Orange, Cal., has a father and four brothers who are physicians.

Dr. E. S. Bullock of Silver City, N. M., recently spent a few days in El Paso.

Dr. Sumner J. Quint has been appointed administrator of the estate of the late Dr. Joseph B. Tanner. The value is about \$2500.

Dr. Charles Pius, who graduated from Cooper Medical College, class of 1906, has located in Guadalupe, Cal., where the *Guadalupe Moon* is published.

Drs. H. B. Stehman and Henry Sherry have in charge the erection of an additional building for the Pasadena Hospital that will cost about \$50,000.

Dr. Senn was delightfully free handed with his friends but frugal in the small affairs of life. Frugal, not because he loved money, but because he considered wastefulness a crime.

Dr. W. V. Whitmore, U. S. C. Medical, class of 1890, was recently elected

member of the Tucson. Ariz., School Board by an overwhelming majority. The doctor is also a regent of the Territorial University.

Dr. N. H. Morrison of Los Angeles, Chief Surgeon of the Santa Fe Company, spent a few days in April inspecting the hospitals and the work of the Santa Fe surgeons in Albuquerque and other points in New Mexico.

Dr. George Dock of the University of Michigan will give the address on "Medicine" at the thirty-fourth annual meeting of the Mississippi Valley Medical Association to be held in Louisville, October 13, 14 and 15, 1908.

Dr. D. S. McCarthy, so well known and highly respected in Los Angeles, has located in Hemet. The doctor graduated from Trinity University, Toronto, class of 1893. We heartily commend him to the people of San Jacinto Valley

Dr. H. G. Marxmiller of Los Angeles urges all of his patients to follow the Lenten diet. He says: "Whether you are Jew or Gentile, the Lenten diet will do your stomach good." It is certainly better than the Diet of Worms.

Wm. Seaman Bainbridge, Sc.D., M.D., New York, has sent us the following reprints:

- (1) Some Phases of the Surgical Treatment of Cancer.
- (2) Metastases Following Incision of a Sarcoma.

Dr. Elliott Alden of 182 North El Molino avenue entertained about fifty of the Pasadena branch of the Los Angeles County Medical Society on Thursday evening, April 3. The society decided not to loan their books to the Barlow Medical Library.

The California Eclectic Medical Journal, Vol. 1, No. 1, O. C. Webourn, A.M., M.D., is before us. It is certainly a credit to the school it represents. It is published in the Security Building, corner Fifth and Spring streets, Los Angeles. Price one dollar per year.

Dr. G. G. Graham, late of 1534 Fremont street, Allegheny, Pa., has taken a year's lease on 1323 De la Vina street, Santa Barbara, Cal., and may make that his permanent home. Dr. Graham graduated from the College of Physicians and Surgeons, Baltimore, Md., class 1882.

Dr. M. A. Schutz entertained the Long Beach Medical Society at the Hotel Riviera, Thursday evening, April 2. After a paper by Dr. L. A. Perce on "The Uses of the X-Ray in the Treatment and Diagnosis of Disease," and another by Dr. Shutz on "Hydropath," a delicious supper was served.

Dr. G. C. Bryan, Chief Surgeon in charge of the El Paso and Southwestern Hospital, Alamogordo, N. M., and Miss Laura June Bishop, Superintendent of Nurses in the same hospital, were married Wednesday, April 15, at the home of the bride, Des Moines, Iowa.

Dr. George H. Kress has returned from the East. At Chicago, he spent most of his time in Hektoen's laboratory working on the opsonic index. He also attended the meeting of the Council on Medical Education of the A. M. A., as the delegate of the College of Medicine, U. S. C.

At the thirty-third annual meeting of the American Academy of Medicine in Chicago, May 30, Dr. Andrew Stewart Lobingier of Los Angeles will read paper subject: "The Place of Woman in the Modern Business World as Affecting Home Life and the Marital Relations."

Dr. John L. Davis, Medical Director of the Pacific Mutual Life Insurance Company, has a new booklet of instructions to medical examiners that contains much valuable information. The doctor would doubtless send a copy to any physician on request. Address care Pacific Mutual Life, Los Angeles.

Dr. Lucius J. Huff was elected Assistant Police Surgeon of Los Angeles to succeed the late Dr. Joseph B. Tanner. Dr. Huff graduated from the College of Medicine of the University of Southern California, class of 1905. The doctor is eminently equipped to fill the position.

Dr. S. A. Knopf's work on "Tuberculosis a Disease of the Masses and How to Combat It" is being translated into Chinese. This makes twenty-two languages in which it is now printed. This graphically written work is now read in more languages than any other volume except the Bible.

Dr. F. E. Daniel in the *Texas Medical Journal*, speaking of the prevalence of tape among the negroes, advises "asexualization in all cases of attempted rape, and in all established cases of sexual perversion which has been expressed in unnatural acts of gratification." He believes this operation would put the fear of God in their souls.

Dr. Philip King Brown of San Francisco is the author of the following reprints:

- (1) Gall Bladder Disease with Special Reference to Its Gastric Symptoms.
- (2) Liffects of Baths on Blood Pressure.
- (3) Symtomatology and Diagnosis of Acute Articular Rheumatism.

The physicians of Warwick, Orange county, New York, owing to the increased cost of living, have advanced their schedule of fees so that now they charge for an office visit 75 cents instead of 50 cents as heretofore, and \$1.50 for a visit within one mile of the office, the former rate being \$1. They charge double this amount for night work.

The New York Medical Journal for March 28 concludes an extended review of Dr. Pottenger's work on Tuberculosis as follows: "In short, we do not see how more valuable teaching in regard to a disease that is now meeting with the earnest attention of the whole civilized world could well have been given within the moderate compass of Dr. Pottenger's work."

Dr. Isaac N. Hughey of Pomona, Cal, died in that city on Thursday, April 16, from an infection received while operating two weeks before. To stop the progress of the poison amputation of the arm was resorted to. Dr. Hughey graduated from the American Medical College, St. Louis, in 1878, and had practiced medicine in Pomona fourteen years.

Dr. Smith L. Walker, formerly resident physician of the California Hospital, Los Angeles, is now Secretary of the Colchester Association for the Prevention of Tuberculosis, Truro, Nova Scotia. The Maritime Medical News says: "We feel that it is only just to say that not only the organization, but practically all the subsequent accomplishment of the association, is due to the energy and unflagging interest of Dr. Walker."

Surgeon McDonald, in charge of Admiral Robley Evans, requested a consultation with some of the leading physicians of Los Angeles. Dr. George W. Lasher, Professor of Surgery, Dr. W. A. Edwards, Professor of Pediatrics, and Dr. Ernest A. Bryant, Professor of Clinical Surgery, all of the College

of Medicine of the University of Southern California, were chosen. After carefully examining into their distinguished patient's condition, they could offer but little encouragement.

Dr. Augustin H. Goelet, 2030 Broadway, New York City, recommends treatment of endometritis by drainage and irrigation. He has invented a double current uterine irrigator that can be introduced without previous dilatation. This is converted into an electrode. Thus negative electrolysis is made use of to facilitate the introduction of the irrigator and by relaxing the canal favors subsequent drainage. For further details see *Medical Record* or write the author.

The Eclectics now, have the presidency of the California State Board of Medical Examiners in the person of Dr. J. Park Dougall of Los Angeles. Dr. Dougall graduated from the California Medical College (Eclectic) in 1904, and is prominent among the Odd Fellows, Woodmen and Knights of Pythias. The Homeopathists still continue to hold the Secretaryship of the Board, Dr. Tisdale having been reelected. Dr. Chas. L. Tisdale graduated from the Hahnemann Medical College. Chicago, in 1878.

There are six public nurses supported by the city of Los Angeles, three district nurses serving under the College Settlement, and three school nurses serving under the city health officer. These nurses watch the poorer class of houses in this city, the Mexican settlement and other districts, and by keeping in touch with conditions often are able to forestall threatened epidemics by nipping them in the bud at the proper time. Their hours are from 8:30 to 5 each day and each nurse is paid by the city a salary of \$75 a month. They watch carefully for cases of tuberculosis, and are invaluable for their work among the maternity cases of the very poor.

Dr. Wm. E. Quive of Chicago says: "Dr. Senn was a man of refined and exalted sentiment, and his heart and mind and mouth were as clean as a little girl's. He could not smile at ribald song, or obscene story or sacrilegious jest: and still less could he degrade himself by repeating one. He knew little of the underworld and revelations concerning it were repugnant to him. The criminal and society columns of the newspapers did not attract him." How different this is from Los Angeles club women who rushed to hear "Mrs. Warren's Profession." If instead of being that of a bawdy-house keeper, a procuress, a follower of the profession made classic by Pandarus, "Mrs. Warren's Profession" had been that of medicine, motherhood or teaching, the club woman would have been conspicuous by her absence.

The Lancet-Clinic in reviewing Dr. Pottenger's work on tuberculosis says:

"No reviewer need make an extended notice of this book. When he can say to the practitioner seeking a work on tuberculosis, 'Here you have everything you require;' when he can say to the specialist, 'It is indispensable,' there remains little more to offer. One can go further and say that if medical works are ever to be placed in the hands of the laity, a copy of this book or a translation should be in the possession of every intelligent tuberculosis patient that could be found. It breathes optimism at every turn, yet sternly represses carelessness on the part of the patient. . . .

"The index is a thing of joy. Whoever had this most important and difficult task in hand certainly brought exceptional ability to his work, and as a result any needed point can be found at a moment's notice. . . .

"A copy of the work should occupy the shelves of every progressive physician."

Robert R. Reynolds, as special mas-

ter, is hearing the testimony of several Asheville, N. C., physicians in the \$100,000 damage suit of Dr. S. A. Knopf, of New York, against the Philadelphia North American. grounds for the suit was the publication in The North American of an address made by Dr. Knopf before the Convention of the National Association for the Study and Prevention of Tuberculosis, held at Washington, May 6-8 of last year. In the course of that address Dr. Knopf maintains that he said: "And when we are in the presence of a dying consumptive, who is suffering, I believe it is our sacred duty to give him morphine to relieve his pain and make him comfortable and let him dic easy." The North American, it is alleged, put a wrong construction on his statement; attributed to him the remark: "Kill your dying consumptives quickly and painlessly by heavy doses of morphine," and then quoted Dr. Knopf as saying: "One thing I wish to sav at this point. It is my practice, and it is your sacred duty when you see a dying consumptive before you, to give that sufferer morphine in plenty, that the end may come quickly and painlessly." It is alleged that Dr. Knopf demanded that the paper retract this statement, and upon refusal the suit was begun. The case will probably be tried in the United States Court at Philadelphia.-Lancet-Clinic.

Dr. Arthur E. Gresham died at his home in Long Beach on December 30, 1907, after a seven days' illness from pneumonia. He was born in Granada, West Indies, of English parents. When fifteen years of age he was sent to England to attend Dulworth College in West London, after which he entered upon the study of medicine at the St. Bartholemew Medical College Hospital. London. He came to San Francisco. Cal., in 1884, and entered Cooper Medical College from which he graduated the following year. He began the prac-

tice of medicine in Los Angeles where he met with merited success until 1892 when his health failed and for a year he led a quiet life at Glendale. In 1893 he re-entered practice at Sierra Madre, succeeding his brother, Dr. Frederic C. Gresham, who had just died there. He located in Long Beach in February, 1906. Possessed of a quiet, retiring disposition, rare literary and musical ability, a refinement of nature and delicacy of touch, all so blended as to especially fit him for his calling of ministering to the sick, it can be fittingly said of him

as of Brutus, "His life was gentle; and the elements so mixed in him, that Nature might stand up and say to all the world, 'This was a man!' "His untimely death is a distinct loss to the profession of Long Beach and to Southern California. He leaves a wife, a son, a daughter and a large circle of friends here and where he previously lived, who sincerely mourn his death. The physicians of Long Beach attended the funeral in a body, six of the younger men acting as pallbearers. The body was cremated.

BOOK REVIEWS

SURGICAL THERAPEUTICS. By Emory Lanphear, M.D., Ph.D., Ll.D., St. Louis, Mo., Professor of Surgery, Hippecratean College of Medicine; formerly Professor of Operative Surgery, Kansas City Medical College, and Professor of Surgery in the St. Louis College of Physicians and Surgeons, Chief Surgeon to the Woman's Hospital of the State of Missouri. Chicago. The Clinic Publishing Co. 1907.

Here is a book written by a man who has seen a financial mirage. The author, of whom we have been hearing for years, had led us to expect great things of him and, instead of a clear, able book like Montgomery's, we have a little, cheaply published work whose chief mission seems to be to exploit H. M. C., Effervescing Saline Laxative (Abbott), and other preparations of like Dr. Lanphear says impressively, "The Abbott Alkaloidal Company use only chemically pure," etc. Advertising is all right, but when it is done through a supposedly scientific book or a supposedly scientific article in the original department of a medical journal, then it becomes unpleasantly near faking.

Dr. Lanphear, cut loose from your H. M. C. (Abbott) associates; get out from under the sirenic influence of the Ravenswood charmers and then we shall look for a real work on Surgery and Gynecology from your brain and pen.

Lanphear couldn't write a book that didn't have some good features, but it's

the Abbott, Waugh, Faugh adulteration that is nauseating.

A MANUAL OF THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE EYE. By Edward Jackson, M.D., Professor of Ophthalmology in the University of Colorado. Second Revised Edition. 12mo of 615 pages, with 182 text illustrations and 2 colored plates. Philadelphia and London. W. B. Saunders Company. 1907. Cloth, 82.50 net. For sale by Fowler Bros., South Broadway.

Dr. Jackson's work has been quite a favorite with the medical colleges, because it contained the essentials for the beginner in Ophthalmology, and devoted but little space to the rarer ophthalmological diseases and more difficult operations. The new edition carries out the original plan and the size of the book has been but slightly increased. The author has added the newer methods of diagnosis and the new lines of treatment which have been proven. The work is very full of useful hints in describing the treatment of various diseases, for instance: In speaking of using drops in the eye, if their object to affect the interior of the eye, it is important that the solution should reach the cornea undiluted, and is accomplished best by having the patient look downward, raising the upper lid, while with the ordinary rubber bulb pipette, the drops are deposited on the upper margin of the cornea, but they should

not be allowed to drop any considerable distance. While on the other hand, if the drops are intended to influence the conjunctiva and are not for corneal absorption, the patient may be allowed to roll the eyes up, the lower lid being drawn down and the drops deposited in the cup thus formed, and while the lid is so held, the eye may be rolled about. The drops should be of blood heat or a little warmer. Taken altogether, this work is a safe, and conservative guide for the general practitioner and an excellent text-book for the medical student.

TEXT-BOOK OF OTOLOGY FOR PHYSI-CIANS AND STUDENTS. In 32 lectures. By Fr. Bezold, M.D., Professor of Otology at the University of Munich and Fr. Siebenmann, M.D., Professor of Otology at the University of Basle. Translated by J. Holinger, M.D., of Chicago. E. H. Colgrove Company, Chicago. 1908.

This work is not written as a textbook for medical students in the ordinary sense of the word, but is a condensation of Prof. Bezold's experiences during twenty-five years of teaching, giving that portion which he considers worth retaining, and it is chiefly valuable as presenting a distinguished author's special views. He devotes considerable space to the physiology and anatomy of the ear, because they indicate the avenues frequented by the numerous diseases of the organ of hearing, but few operations are described in any degree of detail, and the therapy is stripped of all unnecessary ballast. The work, however, will be welcomed by all students who have studied under the distinguished author.

PRINCIPLES AND PRACTICE OF MODERN OTOLOGY. By John F. Barnhill, M.D., Professor of Otology, Laryngology and Rhinology, Indiana School of Medicine; Otologist and Laryngologist to Deaconess and State College Hospitals, Etc., and Ernest DeWolfe Wales, M.S., M.D., Associate Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine; Former Assistant in Otology, Harvard Medical School; Former Assistant Aural Surgeon, Massachusetts Charitable Eye Infirmary, Etc. With 305 original Illustrations, many in colors. Philadelphia and London. W. B. Saunders Co., 1907.

The authors had the following objects in view in presenting this book to the medical public: First, to modernize the subject; second, to correct certain traditional beliefs; third, to advocate the earliest possible prophylaxis or treatment; fourth, to emphasize the importance of a thorough examination and a definite diagnosis as a basis for rational treatment: fifth, to thoroughly illustrate the text. This latter has most certainly been accomplished, for the reviewer knows of no text-book on Otology so completely, thoroughly and beautifully illustrated, and will add that the authors have fulfilled to more than a reasonable extent all of their objects. They enter into the minutest details in describing any particular treatment. For instance, for the removal of hardened wax, they advocate a large piston syringe, a warm, sterile, antiseptic fluid. Ii the cerumen completely fills the canal and is dry and hard, then a spatula or hook may be inserted between some portion of the canal wall and the wax to make a passage for the fluid from the syringe. In those cases, where there is a particularly sensitive or ulcerated underlying skin and no manipulations will be tolerated, the patient may be given a lotion for home use, a satisfactory prescription being:

R Acidi carbolic.... gr. 2
Sodium bi-carb....
Sodium bi-borate.. aa gr. 10
Glycerine oz. ½
Distilled Water...ad qs oz. ½

M.

Sig.

Warm and drop 10 drops into the ear twice daily and allow to remain.

In the course of two or three days, this will so soften the hardest cerumen that it may be easily syringed away.

This is probably one of the most satisfactory of the modern medium sized works on Otology.

DISEASES OF THE NOSE AND THROAT. By D. Braden Kyle, M.D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fourth Edition. Thoroughly Revised and Enlarged. Octavo volume of 725 pages, with 215 illustrations. 28 in colors. Philadelphia and London. W.

B. Saunders Company. 1907. Cloth, \$4.00 net; half morocco, \$5.50 net. For sale by Fowler Brothers, 543 S. Broadway.

Probably no text-book on diseases of

Probably no text-book on diseases of the nose and throat has kept so abreast of the times as has this work. This being the fourth edition since 1899, much new matter is found in the present edition and very few subjects of importance have been omitted.

In treating of acute colds in the head, the author advocates the following procedure in the early stages: "Place in one or both nostrils, depending on the involvment, a tablet containing ½ gr. of sodium chloride. Allow to remain in position until completely dissolved.

This will be followed by a copious flow of mucous and serous exudate, leaving the membrane pale and relaxed. Then protect the membrane by dropping into the nostril, every two hours, a few drops of the following solution:

Olei cassiae.....

Olei santali......aa gtt 6 Alboleni (liquid).....oz. 1

If a slight astringent action is required, swab the membrane with equal parts of comp. tinct. benzoin and 50% boroglycerid."

The work is replete with just such helpful recommendations.

MISCELLANEOUS

PROGRAM OF THE THIRTY-EIGHTH ANNUAL SESSION MEDICAL SOCIETY OF THE STATE OF CALIFORNIA, CORONADO, APRIL 21, 22, 23, 1908.

TUESDAY, APRIL 21, 1908.
MORNING SESSION.

9:30.

Address of welcome by the Chairman of the Committee of Arrangements, Dr. F. R. Burnham, San Diego.

- Dr. Geo. H. Evans, San Francisco. "President's Address."
- Dr. William B. Wherry, San Francisco.
 "The Pathology and Bacteriology of Plague." Demonstration of
- specimens.
 3. Dr. Rupert Blue, United States
 Marine Hospital Service.
 "The Eradication of Plague."
- 4 Dr. F. M. Pottenger, Monrovia.

 "Fourth Annual Report from the Committee on Tuberculosis."
- 5. Dr. Dudley Tait, San Francisco.

 "First Annual Report from the
 Committee on Medical Education."
- 5a. Dr. Lincoln Cothran, San Jose. "Annual Report from the Board of Medical Examiners." SYMPOSIUM ON PURE FOOD.

- 6. Dr. Fitch C. E. Mattison, Pasadena. "First Annual Report from the Pure Food Commission."
- 7. Dr. Titian J. Coffey, Los Angeles. "The Tenement House Problem."
- Dr. Geo. H. Kress, Los Angeles. "The Pure Milk Question. (a)
 Inspected Dairies. (b) Certified
 Dairies."
- 9. Dr. Stanley P. Black, Pasadena. "Meats, Fruits and Vegetables."
- Dr. Luther M. Powers, Los Angeles.

"Bakeries and Restaurants."

11. Dr. William Freeman Snow, Palo Alto.

"Water Supplies."

Discussion of the papers of this Symposium by Dr. Langley Porter (San Francisco), Dr. N. K. Foster (Sacramento), Dr. W. LeMoyne Wills (Los Angeles), and others.

TUESDAY, APRIL 21, 1908.

AFTERNOON SESSION. 2:00.

Joint meetings with the Western Section of the American Laryngological,

Rhinological and Otological Society, and the Pacific Coast Branch of the American Urological Association. These two Sectional Meetings will take place at the same hour in separate halls as posted.

A. Session with the Western Section of the American Laryngological, Rhinological and Otological Society.

IIa. Dr. F. M. Poitenger, Los Angeles. "Some Practical Points in the Diagnosis and Treatment of Tuberculosis of the Ear and Upper Air Passages."

Discussion opened by Dr. Charles C. Browning (Monrovia).

11b. Dr. H. Bert Ellis, Los Angeles.

"Acute Otitis Media—In Infants and Children."

Discussion opened by Dr. A. C. Rogers (Los Angeles).

11c. Dr. William Barclay Stephens, San Francisco.

"Acute Otitis Media—Prophylaxis and Treatment."

Discussion opened by Dr. A. L. Kelsey (Los Angeles).

11d. Dr. Hill Hastings, Los Angeles. "Acute Otitis Media—Indications for the Mastoid Operation."

Discussion opened by Dr. E. W. Fleming (Los Angeles).

11e. Dr. W. H. Roberts, Pasadena.

"The Status Lymphaticus with Particular Reference to Anesthesia in Tonsil and Adenoid Operations."

Discussion opened by Dr. F. D. Bullard (Los Angeles).

B. Session with the Pacific Coast Branch of the American Urological Association.

12. Dr. Granville MacGowan, Los Angeles.

"Haematuria."

Discussion by Dr. Herbert C. Moffitt (San Francisco), Dr. Dudley Tait (San Francisco), Dr. Wesley W. Beckett (Los Angeles), Dr. W. Francis B. Wakefield (San Francisco), and others.

13. Dr. John Campbell Spencer. San Francisco

"When Is Gonorrhea Cured?"
Discussion by Dr. Ralph Williams
(Los Angeles), Dr. Samuel H. Buteau
(Oakland), Dr. J. H. Parkinson (Sacramento), Dr. Saxton Temple Pope
(Watsonville), and others.

TUESDAY, APRIL 21, 1908.
EVENING SESSION.
8:00.

14. Dr. Grant Selfridge, San Francisco. "Direct Examination of Trachea and Bronchi with Killian's Latest Bronchoscopes." Exhibition of patient and instruments used.

 Dr. William Ford Blake, San Francisco.
 "The Early Recognition and Treatment of Squint."

 Dr. H. E. W. Barnes. Santa Ana. "Obstetrical Reminiscences."

17. Dr. Louis C. Deane, San Francisco. "Thrombosis of the Lateral and Superior Longitudinal Sinuses Treated by Opening the Torcular Herophili — Pregnancy — Recovery."

18. Dr. Cullen F. Welty, San Francisco. "Indications for Operative Interference in Acute Mastoiditis."

 Dr. C. A. Dukes, Oakland.
 "Responsibility of the Physician in the Home Training of Children."

WEDNESDAY, APRIL 22.

MORNING SESSION.

9:30.

SYMPOSIUM ON SYPHILIS.

Dr. Stanley P. Black, Pasadena.
 "The Pathology of Syphilis."
 Demonstration of Specimens.

20a. Dr. Ralph Williams, Los Angeles. "Acute Syphilis."

21. Dr. Herbert C. Moffitt, San Francisco.

"Luetic Stigmata of Importance to the General Practitioner."

22. Dr. Samuel J. Hunkin, San Francisco.

Dr. George A. Harker, San Francisco.

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"Syphilis of the Bones and Joints."

- Dr. Hayward G. Thomas, Oakland.
 "Eye, Ear, Nose and Throat Manifestations of Syphilis."
- Dr. J. H. McBride, Pasadena. "Some Aspects of Cerebral Syphilis."
- Dr. Gr\u00e4nville MacGowan, Los Angeles.
 "The Treatment of Syphilis."

WEDNESDAY, APRIL 22.
AFTERNOON,

EXCURSION.

WEDNESDAY, APRIL 22.

EVENING.

HOP.

THURSDAY, APRIL 23.

MORNING SESSION.

9:30.

SYMPOSIUM ON THE THYROID GLAND. 26. Dr. Allen F. Gillihan, Berkelev.

"The Anatomy of the Thyroid and the Parathyroids."

- 27. Dr. Lyman B. Stookey, Los Angeles. "The Physiology of the Thyroid."
- 28. Dr. Dudley Fulton, Los Angeles. "The Medical Treatment of Diseases of the Thyroid."
- Dr. Wallace I. Terry, San Francisco.
 "The Surgical Treatment of Goitre."
- 30. Dr. John W. Robertson, Livermore. "The Relation of the Thyroid to Mental Disease."

Discussion of the papers of this Symposium to be opened by Dr. Wesley W. Beckett (Los Angeles).

- 31. Dr. R. F. Rooney, Auburn.
 "A Resume of the Weber Case.
 Was Adolph Weber Insane?"
- 32. Dr. Charles W. Allen, Los Angeles.
 "The Early Symptoms of Dementia Praecox."

THURSDAY, APRIL 23.

AFTERNOON SESSION.

2:00.

- Dr. C. M. Cooper, San Francisco.
 "The Fallaciousness in Diagnosis of so-called Pathognomic Signs."
- Dr. F. M. Pottenger, Monrovia. "Remarks on Dextrocardia." Exhibition of Patient.
- 35. Dr. O. D. Hamlin, Oakland. "Post-Operative Treatment."
- 36. Dr. Thomas W. Huntington, San Francisco.
 "The Treatment of Fractures of the Shaft of the Femur with Special Reference to Early Operative Interference."
- Dr. W. Francis B. Wakefield, San Francisco.
 "Cancer of the Uterus."
- Dr. A. W. Morton, San Francisco.
 "The Bier Treatment in Surgical Diseases."

Discussion opened by Dr. W. W. Richardson (Los Angeles).

- 39. Dr. Lyman B. Stookey, Los Angeles.
 "The Pharmacology of the Iodides."
- 40. Dr. Ethel L. Leonard, Los Angeles. "Bacterial Vaccines."
- 41. Mr. A. Halden Jones, Los Angeles. "Glycogen Formation from Pentoses."
- 42. Dr. Ernest Dwight Chipman, San Francisco.
 "Seborrhea and its Sequelae."
- 43. Dr. R. F. Stratton, Oakland.

 "Further Considerations on the
 Treatment of Aneurysm by Direct
 Gradual Arterial Closure. Report
 of a Second Case of Aneurysm of
 the Abdominal Aorta treated by
 this method."

Discussion opened by Dr. J. M. Shannon (Oakland).

HYDROLEINE

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QUESTIONS OF CALIFORNIA STATE BOARD OF MEDICAL EXAMINERS, APRIL, 1908.

PATHOLOGY.

- 1. In what disease conditions do we find acetonuria? Name the chemical bodies allied to acetone.
- 2. What conditions may produce a recrudescent fever in typhoid?
- 3. In tuberculous peritonitis, what are the sources of infection; what may be the post-mortem appearance?
- 4. Describe the cerebrospinal fluid in epidemic meningitis; what are the portals of infection; and what is the gross pathology?
- 5. What are the causes of endarteritis; describe the successive microscopic stages; what changes in the brain may result from arteriosclerosis?
- 6. Name in the order of frequency the different lesions that may result from a gonococcus infection of the female
- genito-urinary tract.

 7. What are the typical anatomic findings, post-mortem, in puerperal eclampsia?
- Discuss the theories of the etiology of cancer.
- Microscopic specimens.
- 10. Gross pathologic specimens.

BACTERIOLOGY.

- 1. Describe briefly and clearly the manufacture of serum agar.
 - (a) State the sources of serum that may be used for this purpose.
 - (b) Name three organisms to whose growth it is an essential.
- 2. Given a bacterial invasion, state exactly and in order the steps taken to prepare homologous vaccine, including the standardization of same.
- 3. State the technic of a bacterial examination of milk.
 - (a) What pathogenic organisms may be found?
 - (b) How would you estimate the number per c. c.?
- 4. What is tuberculin?
 - (a) Name three varieties.
 - (b) Describe Calmette's reaction.
- 5. Describe the organism of erysipelas. (a) How would you differentiate it from members of the same group?
- 6. Describe the gonococcus.
 - (a) What organisms may be mistaken for the gonococcus?

- (b) Differentiate each.
- Differentiate between pathogenic and nonpathogenic organisms.
 - (a) Give four examples of each.
- 8. Describe the bacillus of tetanus.
 - (a) Give its common habitat.(b) Name three toxins due to it.
- . Examination of two slides.
- 10. Examination of two slides.

ANATOMY.

- Describe the relation of intra- and extracranial veins, locating five principal emissary veins.
- 2. What segments of the spinal cord supply nerves to the abdominal viscera?
- 3. What muscles attach to the greater and lesser tuberosities of the humerus and what tendon passes between these tuberosities?
- Describe the topographical anatomy of the elbow.
- 5. (a) What bones can be palpated along the inner border of the foot? (b) What ligament does the keystone of the longitudinal arch rest. upon?
- Indicate what verterae mark the level of the following: (a) umbilicus, (b) end of spinal cord, (c) inferior angles of the scapulae, (d) central tendon of the diaphragm, (e) inferior border of the pleurae.
- Describe the arrangement of the superficial inguinal lymphatic glands and indicate from what structures they receive lymphatic vessels.
- 8. What arteries supply the following structures and what arteries are they branches of: (a) thyroid gland, (b) mammary gland; (c) uterus, (d) testicle, (e) great toe?
- 9. What nerves innervate the following: (a) muscles of mastication, (b) muscles of expression, (c) sterno-cleido-mastoid, (d) muscles of the lingual region, (e) muscles of anterior femoral region, (f) skin on posterior surface of the thigh, (g) skin on inner surface of the arm, (h) skin over subcutaneous surface of the tibia, (i) tonsil, (j) meatus auditorius externus.
- 10. What are the relations and position of the pancreas?

GENERAL DIAGNOSIS.

- Differentiate cerebral hemorrhage, embolism and thrombosis.
- 2. Describe bone lesions of syphilis.
- 3. Describe talipes equinus.
- 4. Describe uncinariasis.
- 5. Differentiate pyelitis and pyelonephritis.
- Differentiate variola varicella rotheln and scarlet fever.
- Differentiate dislocation of the head of the femur from fracture of its neck.
- 8. Discuss thoracic aneurism.
- Differentiate inguinal hernia and enlarged inguinal gland.
- 10. Describe psoriasis

HISTOLOGY.

- Describe the histological structures and their relation to each other in a crosssection of the wall of the duodenum.
- 2. Describe the histological structure of the testes.
- Describe the histological structure of a typical lymphatic gland.
- Name the histological structures found in the eyelid.
- Draw a diagram of a cross-section of a nerve trunk showing histological structures.
- 6. Describe the histological structure of the pancreas.
- 7. Describe the histological structure of the wall of the ureters.
- 8. Identify two specimens,
- 9. Identify two specimens.
- 10. Identify two specimens.

GYNAECOLOGY.

- 1. Give five causes of amenorrhoea.
- 2. Give five causes of metrorrhagia.
- Differentiate briefly between: Pyosalpinx, Tubal pregnancy and parovarian cyst.
- 4. Differentiate briefly between: Labial haematoma, labial hernia, labial hydrocele of the round ligament and labial abscess.
- Differentiate briefly between: Haematosalpinx, haematometra and haematocolpometra.
- 6. What is a rectocele, its most common cause and its treatment?
- Give treatment of retroversion of the uterus in a severe case. Outline the operation.
- Give a good reason for circumcising a woman and describe the operation.
- 9. What are the positions of the uterus in the three stages of prolapse?
- Give diagnosis and treatment of urethral caruncle.

CHEMISTRY AND TOXICOLOGY.

- 1. (a) Define elements.
 - (b) Define compounds.
 - (c) Define synthesis.
 - (d) Define analysis.
- (a) Name and give formulae of the compounds of nitrogen and hydrogen.
 - (b) What two important elements found in the blood?
- 3. (a) In what is human milk richer than cow's milk?
 - (b) In what poorer?
 - (c) State the difference between egg albumin and serum albumin.
- 4. (a) Of what significance are haemin crystals?
 - (b) What is the composition of haemoglobin?
- 5. (a) Injury to what principal organs would cause glycosuria?
 - (b) Describe the chemistry of the stomach.

- (a) What are carbohydrates?
 - (b) What is the fat splitting ferment of the pancreatic juice?
 - (c) Name five classes of proteids.
- (a) Describe a quantitative test for sugar in the urine.
 - (b) Give test for bile pigment in the urine
- (c) What is the normal amount of urea excreted by the male in 24 hours?
- Give classification of poisons with example of each.
- (a) Describe Marsh's test for arsenic.
 - (b) Is the quantity of saliva increased or decreased by mineral acids?
- Symptoms: Intense burning pains from mouth to stomach, nausea, vomiting, diarrhoea with bloody stools and swelling of the abdomen, lips, and tongue white and shriveled, death in two days collapse, crystalline substance from found in the stomach. White soluble in water and gives black precipitate with
- Name the poison and state what should have been the antidote.

PHYSIOLOGY.

- 1. Discuss briefly the subject of animal heat.
 - Describe in detail the digestion of carbohydrates.
 - (a) Explain the production of the apex beat of the heart.
 - (b) Give the cardiac nerve supply.
 - (a) In what regions of the chest may bronchial breathing be normally heard?
 - (b) What is meant by Cheyne-Stokes respiration?
 - What is the physiological reason that the head, upper extremities and abdomen are relatively larger in the new-born than in the adult?
 - (a) Give the specific gravity, chemical reaction, and the normal constituents of human urine.
 - (b) Average quantity in 24 hours.
 - Give the distribution and function of the fourth cranial nerve.
 - Distinguish between cerebral and spinal paralyses in (a) muscle tonus, (b) nutrition of muscles, (c) electrical reactions of muscles.
 - Where are the following centers: (a) Parturition, (b) auditory, (c) respiratory, (d) visual, (e) micturition.
- Define: (a) Amnion, (b) corpus luteum, (e) myopia, (d) leucin, (e) eupnea, (f) erythrocyte, (g) hemolysin, (h) neuron, (i) dialysis, (j) lipase.

HYGIENE.

1. What measures should be adopted by the community for the prevention of tuberculosis?

- 2. Why is the frequent medical examination of school children desirable?
- 3. Discuss Wrights' theory of opsonics.
- 4. Why should the registration of births, deaths, and marriages be made compulsory?
- 5. How may pneumonia be prevented?
- 6. What use has been made of horse serum in surgery?
- 7. Describe the different ways by which milk may become contaminated with tubercle bacilli.
- 8. Discuss the relation of entozoa to appendicitis.
- 9. What infections are probably transmitted by the saliva?
- Describe the modern method of dealing with an epidemic of diphtheria in a public school.

OBSTETRICS.

- 1. (a) Describe the changes that take place in the mucus lining of the uterus preparing it for the reception of the fertilized ovum.
 - (b) If it becomes attached what further changes take place?
 - (c) If it passes without becoming attached what further changes occur?
- 2. At what period of pregnancy is an abortion or miscarriage most dangerous, and explain fully why.
- Describe the conditions most likely to result in laceration of the cervix, and what remedies would you use, or what treatment would you employ to reduce the danger as much as possible.
- Describe the clinical symptoms that would lead you to suspect tubal pregnancy during the early months of gestation.
- Name five diseases that may be transmitted to the foetus in utero.
- Describe fully how you would conduct a fact presentation.
- In breech conditions:
 - (a) Are they more dangerous to the mother? If so, why?
 - (b) Are they more dangerous to child? If so, why?
 - (c) Describe how you would conduct them to decrease the danger to either as much as possible.
- 8. Name ten drugs the mother should be instructed to avoid during lactation, and state fully how they endanger either the mother or child.
- 9. Describe fully the difference in the conditions calling for the use of oxytpcics, and those calling for forceps.
- 10. Describe the conditions which would lead you to fear impending rupture of the uterus, and what would you do to prevent it?

THERAPEUTICAL HINTS

Dr. H. Endeman of New York in der Hansdohtor, April, 1908, says: ". . . MEATOX has from time to time been analyzed by different chemists and it is absolutely free from preservatives. These analyses and physiologic experiments all show, too, that it contains a high percentage of digestible meat protein, that is, in round numbers about 80%. Of fat it contains about 6% to 7%, and of celery salt used as flavoring, less than 1%, indigestible substances less than 1%, with water and substances forming the balance. That such a preparation has a very high value as food in cases of sickness and convalesence and in chronic malnutrition is obvious of course. . . . I know of no meat preparation which possesses such a high percentage of digestible nutriment as does MEAT-OX."

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INFECTIOUS DISEASES.—As the kidneys are the most active channel of elimination, not only of leucomaines and ptomaines, but also the micro-organisms of infectious and other diseases, it is specially important that elimination be constantly favored by the administration of a soothing and healing diuretic resolvent. This indication is met by administering sammetto in teaspoonful doses four times a day. This explains why this remedy is so valuable as adjuvant treatment in la grippe, scarlet fever, gonorrhea and other diseases.

If you see a tall fellow ahead of a crowd,

A leader of men marching fearless and proud,

And you know of a tale whose mere telling aloud

Would cause his proud head to in anguish be bowed,

It's a pretty good plan to forget it.

If you know of a skeleton hidden away In a closet, and guarded, and kept from the day

In the dark; and whose showing, whose sudden display

Would cause grief and sorrow and lifelong dismay,

It's a pretty good plan to forget it.

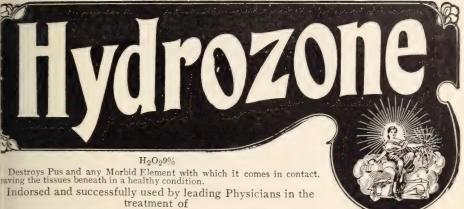
President Roosevelt calls attention to the fact that during the panic of 1893 we had but \$161,000,000 in the Treasury, now we have \$904,000,000. Hard times came then because the country was poor—now the country is rich. What are you worrying about?

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Hours of Opening.—The Library is open every week day from 1 to 5 p.m., and Tuesday, Thursday and Saturday evenings from 7 to 10. Special attention is called to the change in the Library hours. The opening of the Library for three evenings each week, is in response to requests from several sources, and it is hoped that the new arrangement will meet the needs of many who are unable to avail themselves of its privileges through the day.

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Books should be returned or renewed at the end of two weeks.

Physicians may obtain books from the Library of the Surgeon-General's Office, U.S.A., through this Library by paying express charges both ways.

Since the first of the year, the Library has received valuable medical, books and journals from the following doctors: Drs. Woodruff, Day, Pottenger, Wager, Walter Lindley, Edwards, Johnson, Williams, Dougall, Black, Reed, Buell, Hinsdale, Rogers, Lund, and Mr. J. A. Graves.

Recent accessions to the Library shelves:

.... Ed. 3 N. Y. 1905

book of Surgery......Ed. 4 Phila. 1896
Krehl, Ludolf, Principles of Clinical
Pathology......Phila. 1905
Landois, L., Text-book of Human
Anatomy.....Ed. 10 Phila. 1904
Lydston, G. Frank, Surgical Diseases
of the Genito-Urinary Tract....Phila. 1906
May, C. H., Manual of Diseases of
the Eye....Ed. 4 N. Y. 1904

McFarland, Joseph, Text-book Upon Pathogenic BacteriaEd. 5 Phila. 19 Montgomery, E. E., Practical Gyn- ecologyEd. 2 Phila. 19 Osler, William, Principles and Prac- tice of MedicineEd. 6 N. Y. 19 Powell, William M., Saunders'	05 06 05
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Pocket Medical FormularyEd. 7 Phila. 19	
Prescott, Albert B., First Book of Qualitative ChemistryEd. 12 N. Y. 19	03
Pottenger, Francis M., Pulmonary Tuberculosis	08
Saxe, G. E. De Santos, Examination of the UrineN. Y. 19	04
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Stelwagon, Henry W., Treatise on Diseases of the SkinEd. 4 Phila. 19	05
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Stewart, G. N., Manual of PhysiologyEd. 4 Phila. 19	00
Stohr. Philip, Text-book of HistologyEd. 4 Phila. 19	
Treves, Frederick, Surgical Anatomy Phila. 19 Tyson, James, Practice of Medi-	
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copoeia of the United StatesPhila. 19 Williams, Herbert U., Manual of)5
BacteriologyEd. 4 Phila. 19 Willoughby, Edward F., Hygiene	05
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Pharmacy, Pharmacology, and TherapeuticsEd. 5 Phila. 19	03

THE MEANING OF CAPS AND GOWNS.

At most college functions, and particularly so during commencement festivities, the academic cap and gown are in constant view. Undergraduates and newly-fledged bachelors proud of their right to distinctive garb, visiting alumni glad thus to link arms once again with a vanished past, the august faculty body, and those of the official guests whose scholastic attainments entitle them to the privilege, all don the flowing robe, and top it with the quaint and tasseled mortarboard.

Some persons may call this peculiar attire a piece of antiquated flummery, but even they admit the somber robes, relieved here and there by the brilliance of the hood linings and of the many-hued velvet facings, lend beauty as well as dignity to the assemblage gathered upon the platform.

The casual glance notes little, if any, difference in the appearance of the various gowns, but the initiated eye can tell instantly, not only the exact degree of scholarship attained by the wearer, but also the faculty of learning which awarded it, and the university where it was obtained. There are other distinguishing points, but the main ones may be summed up as follows:

Matriculation at the college entitles the student to wear a gown and mortarboard of black woolen material, usually When he wins his bachelor's degree, he may attach a hood three feet long to his gown, made of the same woolen stuff, and lined with the colors of his alma mater. When the bachelor attains the master's degree, or the doctorate, he is entitled to the silken gown and hood, the latter four feet long. The doctorate entitles him also to wear a panel outlined with his college colors, beneath his hood, and to exchange the black tassel on his mortar-board for one of gold.

Even the sleeve changes with the value of the degree. The open pointed sleeve of the bachelor's gown is closed for the master, and the doctor wears a round one trimmed with bars of velvet.

The doctor's degree being the highest in the gift of a university, his attire is the most distinguished in appearance. He may, if he choose, adorn his gown with velvet facings, black, or of the color which indicates the special faculty which recommended him for the degree. White stands for the school of arts and letters, blue for philosophy, scarlet for theology, purple for law, yellow for science, and green for medicine.

Understanding these distinctions, the visitor at a college function, watching the long procession of notables file to their places upon the platform, can recognize at a glance the degree attained by each, the faculty which recommended him for it, and the university which conferred it. Occasionally he may err in the last point, for a man officially connected with a college courteously displays its colors in his hood, instead of those of his own alma mater.—Epworth Herald.



Vol. XXIII.

Los Angeles, June, 1908.

No. 6.

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THE NEGRO CONSUMPTIVE.*

BY CHARLES R. GRANDY, M.D., NORFOLK, VIRGINIA.

When one looks at the problem of consumption among the negroes, one is brought face to face with the fact that proportionally about three times as many deaths occur from tuberculosis among the negroes as among the whites, and that furthermore a very small percentage of negro consumptives ever recover. There must be some reason for this, and also some way of improving these deplorable conditions. This question has been confronting the Norfolk Anti-Tuberculosis League for several years, and for that matter is still confronting us, for we do not pretend to have solved it-as we have found the question a very complex one; so complex indeed that it needs to be attacked from all sides, as I think I will be able to show, and in consequence should be widely discussed in order to get as many people as possible interested in the work.

A small committee of the Norfolk League, consisting of Miss Taylor, who has charge of the Industrial Classes for the Negroes; Mr. Pannill of the Board of Health, and the writer, has been trying to obtain information on this subject; and first of all we have tried to get the opinions of the negro doctors and preachers. These answers and our own observations will be combined with what little I have heard and read on the subject, and presented to you for criticism and advice.

The large question before us may be divided thus: Is there a physical predisposition or lack of resistance to tuberculosis in the negro? Or is the predisposition rather a mental one, in that he is unable to rise up to meet the conditions which face him? Or are these adverse conditions forced on him on account of racial prejudice? All these have been given as answers to our problem of why so many negroes die of consumption. Which of them is correct?

On first sight it appears that there must be some physical racial predisposition, but this has been answered by the statement that before the Civil War, consumption was almost unknown among slaves in the country. If this be true, (and I believe it is true in the main, though lack of reliable statistics

^{*}Read before the National Conference of Charities and Correction, Richmond, Virginia, May 7, 1908.

keeps me from being able to either positively confirm or deny it,) it merely proves that when the negroes lived orderly lives under conditions resembling those at a Tuberculosis Sanatorium, they seldom contracted consumption.

On the other hand, probably the most intelligent negro physician in our district writes: "I can discover nothing either in his habits or manner of living to account for the negro's proneness to tubercular disease. Other races, the poor white Americans, Italians and Irish live under the same conditions with regard to habits and mode of living, as the masses of the negroes do, and yet with the possible exception of the Irish, they do not fall victims to consumption in so large numbers as does the negro." Is it not possible that the whites have obtained some slight immunity to tuberculosis through generations of contact with it, and that the negroes as well as the Indians have not that slight immunity? In consequence of this, when these two races are exposed to tuberculosis under conditions favoring the disease, they have not the natural resisting powers of the whites, and so contract it in much larger numbers. (Nevertheless, please do not for a moment consider that I believe that this is the only side of the problem, but merely that this decreased resistance will need extra sanitation to keep off the diseasewhereas in reality the sanitary conditions surrounding both the negroes and the Indians are of the worst.)

Add to this the fact that the negro has not yet become accustomed to the cold of our country, and that in consequence he tries to shut out all the cold air possible, and that this poor ventilation is one of the conditions most favorable to the spread of the disease. Here we certainly find physical peculiarities which act against the negro in his fight against tuberculosis.

This physical predisposition is however not nearly so certain as various other conditions, which surround the majority of negroes, and which would conduce to tuberculosis in any race, though probably not to the same extent as in the negro. I refer to poor housing, overcrowding, lack of ventilation and insufficient nourishment-back of these poverty, ignorance, thriftlessness and vice; conditions which prevail to an alarming extent among the negroes. And these in turn, when applying to the greater part of a race, must be due either to a mental unfitness to combat the existing situation, or else to its being forced into them through the prejudices of another race.

Is there then a mental unfitness in the negro to combat the difficulties of our twentieth century life, more especially the life in the towns, on account of which he falls a ready victim to tuberculosis? I scarcely think this can be questioned, though I do not think this a discredit to the negro. We must remember that our system of living has been of very gradual development, stretching over thousands of years, and that in this gradual development we have become used to city problems and city conditions, and indeed we have imperceptibly changed from the savage to the civilized being, or mentally speaking from the child to the adult. Now the negro savages (children mentally) were brought between one and two hundred years ago to this country. While they were slaves they developed wonderfully under the care and tutelage of their masters, and seemed in a hundred years to be approaching a mental development which it took the white race thousands of years to attain. When the restrain and tutelage was taken away from them the artificial forcing of their minds ceased and they were thrown on their own resources to combat conditions to which they were completely unused. A small per cent. is apparently meeting these conditions, but the majority has not been able to do so.

This mental unfitness for modern urban life is shown in the family life, where in a large part of the negroes, the support is thrown almost entirely on the woman, as is very frequently the case among savages. Here the woman has to leave the children to gain a livelihood for them. In the country districts where the children can be turned loose, this does not make so much difference, but in town they must be put in houses where there are women who do not go out to work, and I have known these women care-takers to be consumptives. Again I have known a negro husband to desert his wife because she had consumption, leaving her to the charity of the neighbors. Another mark of mental childishness in the negro is the seeming inability of the majority to persevere in an occupation or under-They apparently must have change, either in their jobs, their dwellings or their towns; on account of this tendency a large part of the men will only work a part of the time. higher their wages, the fewer days will they put in, this being especially the case when they have wives who are cooks and can supply them with food. The result of this can only be poverty, which means overcrowding and poor food, two big predisposing causes of tuberculosis. On account of frequent changes in dwellings more houses are infected by careless consumptives, and more healthy people are in turn infected by these houses. On account of this same lack of perseverance we can seldom get a negro to continue treatment for consumption-they simply will not put up with a restraint necessary to obtain a cure. This has not only been our usual experience in Norfolk, but at the Sanitorium at Ironville, none of the negroes would continue the free treatment offered them. They cannot understand why they should not go to a dance, simply because they have consumption, nor are they willing to use

sputum cups, for fear that their friends will say that they have consumption. This childishness which keeps them in the first place from being willing to acknowledge they have consumption and later on from being willing to persevere in the treatment is the reason why so few negroes are cured. That a large per cent, can be cured, has been proved at Petersburg at the Central State Hospital for the Insane, where being committed as insane, they can be forced to carry out treatment. I can give you other examples of this mental unfitness to meet our conditions, or as I prefer to put it their "mental predisposition" to tuberculosis, but I think I have given enough.

These inherent qualities in the negro are aided by poor tenements and lack of building laws, at least in my own city, and I have reason to believe in other Southern cities, and possibly by some municipal neglect of the negro portion of the town. But that this is a secondary condition is proven by the fact that the negro mortality from tuberculosis in Norfolk (4.33 in year 1007) is less than that in the registration States (all of which are north of the Potomac,) less than that in Washington, and much less than that in Boston, where they also have a good class of houses. And this likewise disproves the contention that the tremendous amount of consumption among the negroes of the South is primarily the result of a racial prejudice, as is supposed by some of the negroes themselves.

From what has preceded it will be seen that this "mental predisposition" in the negro renders the problem of tuberculosis much more difficult than in the whites. Can the problem be solved and how? The usual answer is one word "education," but the kind of education is not specified. This is a good deal as if I had called in a consulting physician to see a sick man and he had simply advised me to give him "medicine," without specifying the kind.

The ordinary lectures and the ordinary circulars are inefficient except for the most intelligent class. The others will listen to the lecture and read the circulars, but like the children they soon find the instruction too hard to carry out, especially where they curtail their evening's amusements. Visiting nurses are of more service, but neither our white nor our colored nurse has been able to make the majority of the patients use sputum cups or keep their windows open after the nurse had left the house. Primary education, which we Virginians most heartily believe in for the negroes, has also been of no service in this regard as is shown by the increase in tuberculosis in the last twenty years, along with the increase in the number of negroes who can read and write. The truth is that these only better a few of the symptoms, but they do not get at the underlying cause—the "mental predisposition." But will it be possible to change the mental and moral characteristics of a race? I must confess that I am not very sanguine in regard to this, for the task is that of teaching them to live a moral, simple and properly regulated life. It can best be done by getting them back into the country and into the country of the South, where climatic conditions are favorable for the negro. But to do this they must give up much of their "social life" and their town amusements-the dance hall, the barroom and the crap game. Can their childish minds be educated to see the wisdom of this? Not only should they go to the country, but as many as possible should own their own homes there, and I am glad to say that more and more negroes are doing this, for in these cases we find a proper family life, and in consequence not near so much tuberculosis.

But this is not within the reach of the masses of the negroes in the towns, masses which I am sorry to say are being steadily augmented from the country. Can we not at least help them by symptomatic treatment? To do this we must begin with the children and each city with a considerable negro population should have a Day Nursery and Kindergarten, in charge of a capable white woman, where the children of the working negro women could be left, and where they would not be infected with tuberculosis, as is often the case now. Next the cities of the South should pass Tenement House Laws, as well as Tuberculosis Registration Laws, under which they could better follow up and disinfect rooms after the removal of tuberculous occupants,

Furthermore I believe that where an advanced consumptive refuses to obey instructions and is endangering those around him, he should if necessary, be forcibly removed to a hospital, as is now done with cases of smallpox and some other contagious diseases. This of course would apply to white as well as to colored patients, but it would have to be used much more frequently with the latter. As far as I know there is at present no sanitorium especially for negro consumptives, and few are treated in the Sanitoria of the North. Such a sanitorium should prove of great benefit by teaching early cases how to live so that they in turn could teach their fellows. But such a sanitorium will have many difficulties; first it will be hard to get the early curable cases, as negroes seldom apply for treatment till the disease is far advanced, then it will be found very hard to get the cases to submit to outdoor treatment without which no good results can be obtained. really believe that such an institution would be of very little service unless the patients would voluntarily commit themselves, so that they could be made to obey the rules, and even then we would have to wait a long time to see results.

The white people of the South are extremely interested in the Negro Tu-

berculosis Problem—both from the fact that consumption in the negro is an ever present danger to the whites and because we feel, that to a great extent, we are the guardians of the negro and we hate to see him suffer needlessly. But as we have no sanitoria for our own consumptives, we can scarcely be expected to provide them first for the negroes, especially when we realize that a negro tuberculosis sanitorium is a very uncertain venture. We nevertheless are even now trying to better the situation as a whole, though with very poor results I must confess, on account of the great inherent difficulties. So I am appealing to you as trained workers to thoroughly investigate this important problem, and give us advice as to how we can best attack it.

THE NEGRO'S OUTLOOK FOR HEALTH.*

BY BEVERLEY WARNER, D.D., RECTOR TRINITY CHURCH, NEW ORLEANS.

When it comes to pass in the course of human events that one tenth, or thereabouts of a nation, with nominally equal rights and privileges,—but are separated by impassable barriers, social and political from the life of the other nine-tenths, then arises a problem of huge dimensions and vital importance.

It is the problem of both the majority and the minority. Whatever affects the negro in the United States affects the white man, and the outlook of the negro for health is one phase of the problem which is especially our concern. Is the negro race an increasing or decreasing factor, numerically considered, in our national life? Is there a race tendency to decay? Are there reasons to warrant us in believing that the answer to the negro problem so-called will be found in the ultimate disappearance of the negro, as the Indian has disappeared?

Prof. W. F. Wilcox, of Cornell University, Chief Statistician of the United States Census Office, declares that if certain anticipations are realized, "the negroes will continue to become, as they are now becoming, a steadily smaller proportion of the population."

Dr. W. B. Smith, of Tulane University, in his interesting book "The Color Line," which I commend for many reasons to every student of this question,

holds the deliberately prepared brief, that the negro problem, so far as it means menace to the Caucasian, will solve itself by the dying out of the negro race.

The laymen whom I have consulted,—planters, and managers of plantations employing large numbers of negroes,—while not unanimous, are nearly so, in holding this pessimistic view.

This is largely speculation, of course the result of observation over only a part of the phenomena involved. Physicians will not say that it is capable of scientific demonstration. Even among men who would like to believe it, I find considerable hesitancy in accepting it as certain.

If the searcher after truth thinks it a simple matter to be settled off hand by statistics drawn from census reports, he is doomed to disappointment.

Acquaintance with the elusive quality of even substantially accurate statistics inclines the student to wariness. But when these statistics have to do with the health of a people, birth rate, death rate, and like vital factors, there is need for still greater caution. We can only perceive tendencies which may be easily counteracted by other facts than those under inspection.

I will ask you presently to bear with the introduction of a few statistics,—

^{*}Address delivered before the National Conference of Charities and Correction, Richmond, Virginia, May 11, 1908.

very few,—which concern the belief of many patient investigators that this outstanding tendency is towards a steadily increasing "margin of white supremacy."

The Hon. Wm. H. Fleming expressed this in an interesting and illuminating address before the State University at Athens, Ga., in June 1906. "Instead of the whites of the south being overwhelmed with a deluge of negroes, the certainity of continued white supremacy has steadily increased with every decade."

This may be true, and probably is true, without indicating any tendency toward the final disappearance of the negro race. Neither does it necessarily involve that the future outlook of the negro for health is hopeless.

The best statement of the situation from those who hold the optimistic view, will be found in publications of Social Studies under the auspices of the Atlanta University, especially that one bearing date of 1906, entitled "Health and Physique of the Negro American." This series afford valuable data for every student, and gives evidence of earnest initiative upon the part of leading negroes, in attempts at the solution of their own race problem.

The statistics used pro and con, are those of the National Census, and I repeat are very imperfect. Even when thought to be as reasonably accurate as those of 1900, they cover but a small part of the area embraced by the whole question. For example, the death rate of only one-eighth of the negro population was recorded in the 1900 census; and while this has value in indicating a drift, nine-tenths of that one-eighth dealt only with negroes in cities. Now it has been pretty generally assumed that the health of the negroes in the cities is inferior to that of the country negro. Many even infer that the excess death rate of cities is balanced by the lesser mortality of the country. I find myself unable to agree with either conclusion.

Comparing mortality of whites and blacks in the registration areas, we find that while there is a reduction in both tables for the decade 1890-1900, the decrease among the whites is slightly greater than among the blacks.

For the entire registration area during the above period the decrease in the death rate of the negroes was .3; of the white I.8. For the registration states, the negroes I.74; the whites 2.2. For cities in registration states the negroes 3.9; the whites 3.5. For country districts in registration states an increase of mortality was shown of .9 black and .1 white.

You will note there is but little difference in this death rate per thousand, but that the slight difference is in favor of the white race. You will notice also that these statistics so far as the negro is concerned are gathered so largely from the cities, as to eliminate the country negro altogether.

The most significant facts in the whole problem, however, are those drawn from the mortality tables of children in 1900.

The death rate of those under one year was for the whites 158 per thousand (male 175.9; female 139.8); that of colored children 371.5 per thousand (403.9 male and 339.7 female).

The infant mortality of the negro was thus more than twice that of the white. If that rate is continued, the outlook of the negro for bare existence is imperiled, whatever his outlook for health may be.

The testimony of almost every intelligent observer in country and city alike is that the negro families are much smaller in number than formerly. Whatever the reason, this seems to be one fact about which there is no dispute, and if it is substantiated by the figures of the next census, the pessimist may settle himself with considerable firmness in the saddle of reasonable speculation.

We have one other source of comparative statistics, the accuracy of which is unchallenged, and the inference to be drawn from one of its tables, perhaps throws light on the smaller families of the negroes.

In physical examinations for the entrance of enlisted men to the United States army, there is found to be but little difference, on the whole, between the two races, with perhaps a small percentage in favor of the negro. This may be reasonably accounted for, in part at least, by the fact that so large a percentage of whites seek to enlist because of failure in other lines and who take to the army as a last resort.

Such life failures are due in great measure to those personal habits which mean physical degeneracy, and consequent rejection from the army. The negroes, on the other hand, who seek enlistment are in larger proportions from among the smart and ambitious of their race. The comparison between the two is a comparison of incompetents with a picked class, and the superior physical condition of negro over white applicants is natural.

But the fact of most significance drawn from those statistics, and bearing directly upon the outlook of the negro for health, is indicated in one cause of failure to be received into the army. We find that for the four years of 1901-4, the rejections per thousand on account of venereal diseases, were for 1901, whites 19.65; blacks 53.50; for 1902, whites 21.57, blacks 34.60; for 1903, whites 26.11, blacks 51.14; for 1904, whites 100.46, blacks 170.78. The prevalence of these diseases among the negroes of the cities is one of the causes of foreboding for their future. On the authority of planters and others in the country districts, I am inclined to believe that they are quite as badly off there.

The transmission of diseased life carries its own certain penalty,—the disease tendency where actual taint is not conveyed, and weakened power of resistance.

The few statistics I have quoted, I beg to repeat, prove nothing. The utmost that the conservative thinker can say is that the tendency of these, and other figures with the same general drift, is in support of the judgment of a great majority of white physicians, especially health officers, and of white laymen who have had the opportunity of first hand observation,—that the outlook of the negro for health is uncertain,—while not hopeless.

The U. S. Census Bulletin 8, "Negroes in the United States," sums up the situation coldly and dispassionately as follows: "It seems not improbable that these figures may be trusted so far as they indicate that there has been a decline in the death rate of each race during the last ten years (1890-1900); that the decline among the negroes has been less rapid than that among the whites, and that the death rate of the negroes at the present time is about, but not quite, twice that of the white race."

Opposed to this is the belief expressed in a letter to me, by a leading negro of the far South, a man of education and ability, editor of an extensively circulated religious newspaper, that "there is a decided improvement in health conditions among the negroes. Thrown out immediately after the war upon their own responsibility, followed by the flocking of negroes into city life, with which they were not familiar, and being crowded in these cities into small and dark rooms where there was a lack of air and of sunshine, the mortality of the negroes showed to great disadvantage. As the homes are improved (and the improvements of home life is very decided), and as the laws of hygiene and of health are known, the health conditions of the negroes greatly improve."

The negro physician of prominence and recognized ability has been found in my own personal experience to be reticent on this subject. Of twelve such physicians to whom I addressed a letter, (using, by permission, the name of the editor whose words I have just quoted) asking merely for an opinion based on their general observation, I have received but one answer; and that one did not think my question "sufficiently explanatory to warrant a full and intelligent answer."

The crowding of the negro into the city is admitted by the leaders of his race—as well as alleged by the thoughtful judgment of white students—to be fraught with danger. Dr. Smith, in his previously quoted book, "The Color Line," says: "To all appearances the negroes will stream steadily towards the towns, and gather more and more densely in certain localities. But this tendency deals them death."

Prof. Dubois of Atlanta University, whose "Souls of the Black Folk" thrills with the most pathetic and tragic quality, says, speaking of the efforts of the negro to settle and take root in the soil,—"Fully ninety-four per cent have struggled for land and failed, and half of them sit in hopeless serfdom. For these there is one other avenue of escape toward which they have turned in increasing numbers, namely, migration to town."

We can but echo Dr. Smith's conclusion that this means death to the negro.

While there is an improvement in the sanitary and hygienic conditions surrounding some of the city negroes, it is but a small proportion of the whole. The churches and public schools are doing much, but bad liquor, cocaine, veneral diseases, added to the tuberculosis plague, play sad havoc with a people crowded and herded as the mass of city negroes are.

This reminds us that another factor has been added to the problem we have under consideration, of quite unknown weight.

The cocaine habit has been developed of late years among the negroes of the

cities with apparently appalling results.

There are no statistics available to show how widespread it effects, but there is no lack of testimony that there are grave effects.

If the cocaine habit were confined to the lowest stratum of negro population, we might group it with bad whiskey and syphilis as only the practice of the most degraded.

But this is not so. It is perfectly well known that the average negro below the professional class, day laborers, house servants, etc., is becoming addicted to the use of the drug. I have this on the testimony of physicians who have no reason for misstating the facts, or of viewing them from a biased standpoint.

To this use of cocaine as a regular custom, many believe, may be charged an increasing violence of disposition; a reckless disregard of consequences; an unusual ferocity in the accompaniments of crime, on the part of negro malefactors. Again, this is a speculation, but it is speculation based upon close observation.

The strictest laws governing the sale of cocaine are about as effectual in large cities as those governing the sale of liquor. The penalties for breaking these laws which stop short of prison stripes and revocation of license are grossly inadequate.

When the penalty is incurred by a white man, it ought to be trebled, whatever its original severity.

Cocaine then, as an element in weakening the racial stock, cannot be left out of account.

It is possible that a feeling of depression over the difficulties of the present, and the uncertainties of the future, may have some permanent effect upon the health of the race.

Observers in the country tell me that the negro of the present generation is a different creature entirely from the negro who emerged from the Civil War, having grown up in slavery. That slavery was a blighting curse to this land I have no doubt whatsoever; but that it was a material paradise for the negro in general is also beyond dispute.

The relation of the old master to the new freedmen after the war was, in most cases, cordial and sympathetic. There is many a section of the South yet, where these relics of before the war still live and are cared for at the expense of the old master's family.

The relationship of mutual interest and mutual understanding of, and respect for each other's position, which characterized the former state has passed away, and in the transformation, the negro, with the great gain of freedom, has endured great losses.

In the South, the negro will never be allowed political power or social consideration. I do not stop to explain or defend this, but to state a simple fact. This is ever before the negro race. It must have an effect upon the mind and soul which in time will react upon the body.

It has been noticed that the old joyous note has disappeared or is fast disappearing from the life of the negro. The levees of New Orleans and the river towns once rang with the songs of the roustabout and deckhands. This has passed away, and a lugubrious chant has succeeded, where dogged and sullen silence does not prevail. How far this latent hopelessness of mind may affect the strength of body, I do not know, and therefore pronounce no judgment. It is one of the conditions, however, with which we have to deal, in touching upon the negro problem at all.

From the bird's eye view we are enabled to get of the tendencies observable in present conditions, we can but decide that the physical status of the negro, from a most conservative point of view, is low, with but uncertain hope of improvement; in other words, that the outlook of the negro for health, while it cannot be pronounced to be hopeless, is serious enough.

From a wide and fruitful experience, Dr. Rudolph Matas, of New Orleans, declares that "the number of negroes dependent upon hospital relief is steadily increasing, and is out of proportion to the number of population." On the debated question as to the influence of the mulatto and race amalgamation, Dr. Matas has an important word to say. This authority, it must be remembered, has under observation the Charity Hospital of New Orleans, one of the largest in the world, through which a constant stream of black as well as white patients is pouring.

While reliable data are wanting, "the almost unanimous verdict of these who are best authorized to speak on the point, would lead us to accept as a fact, that what we have only the right to consider as an impression,—namely, that mulattos, and especially those of Anglo Saxon crossing, have not the strength and endurance of either of the pure races. It is certain that they are much more liable to hereditary diseases, especially tuberculosis and syphilis. It is almost certain that when they marry among themselves, the next generation is even still feebler."

Is there a remedy for racial degeneracy, and what is it?

In the Atlanta publications No. 2 for 1897, Prof Eugene Harris, of Fisk University, declares bravely that immorality is responsible for the physical status of the negro, "and if" he says, "we are to strike at the root of the matter, it will not be at sanitary regulations, but at social reconstruction, and moral regeneration."

I will return to the matter of sanitary conditions presently.

What has the scientific student and scholar to say of this? Quoting from Hoffman, in his important "Racial traits and tendencies of the American Negro," and approving the spirit of the statement, our previously quoted Dr. Matas says:

"Whatever the race may have gained

in an intellectual way, which is a matter of speculation, it has been losing its greatest resources in the struggle for life and sound physical organism and power of rapid reproduction. . . . All the facts obtainable which depict truthfully the present physical and moral condition of the colored race prove that the underlying cause of the exhaustion mortality and diminishing rate of increase in population, is a low state of sexual morality, wholly unaffected by education."

I call attention to the final words,— "A low state of sexual morality wholly unaffected by education."

Mere book education is the solution of no problem on earth. If immorality is largely at the botton of the physical degeneracy of the negro, secular education is not the remedy for it.

I add one more bit of testimony from the man of science.

"That the degenerating tendencies of the colored race, revealed by statistics, are due essentially to the influence of unfavorable hygienic surroundings; to unfavorable social (including moral) environment; to all the causes which lead to a bad heredity, vice, dependency and degradation, and which are acting simultaneously upon an ethnologically inferior, and passive race, which is struggling for existence with a superior, aggressive and dominant population."

There is so much confusion in the spoken and written testimony as to these problems, that it is refreshing, significant and convincing to observe one outstanding admission of white and black, of cold men of science and ardent preachers of morality, that the moral weakness of the negro has, if not a preponderating, which is probable, still a very great influence upon the mortality of the negro race.

Therefore, whatever view men may hold,—whether with the optimist that the outlook is promising, or with the pessimist that it bodes ill,—a grave moral problem is involved.

Returning to the assertion of Prof. Harris, of Fisk University, that "to strike at the root of the matter it must be not at sanitary regulations, but at social reconstruction and moral regeneration," I cannot but believe with my whole soul that sanitary regulations and kindred devices have a very great deal to do with social reconstruction and moral regeneration.

It is not too much to say that immorality is often the immediate product of unsanitary and hygienic conditions. The negroes do herd more than the whites, and the mere contact of the herding process results in some of the immoral practices which, at the least, contribute to the physical degeneration, and high death rate of the negro race.

The physical conditions, amidst which such a large number of negro children are brought up, and the result of ignorance as well as neglect; of mal-nutrition; crowded quarters; foul air; a fatal lack of a sense of responsibility for tomorrow as well as today.

The negro race is amenable to teaching, instruction and direction in these things. There was the most perfect co-operation of negroes with the white population of New Orleans during the latest—and consequent upon the scientifically conducted campaign, we believe the last epidemic of yellow fever in 1905.

I believe that the prophet of hope for the negro future is the Sanitary Reformer equally with the minister of religion. Certainly, Jesus of Nazareth combined the two in his ministry to this world.

The general conclusion I draw from our consideration—all too brief for its importance—of the grave question is, that moral problems are quite as much the duty and task of the political and social student as of the priest and preacher.

The righteousness which exalteth a nation is as definite an entity as its constitution. It is not a mere commonplace

of ecclesiasticism; it is the vital quality of social and political health.

The dictum of Thomas Jefferson that "moral duties are as obligatory on nations as on individuals" is worth pondering in political committee rooms as in church vestries.

The moral law is the law of eminent domain.

This problem of the negro as to health, involved in that of morals, I beg to repeat, is the problem of the white race equally with the black. It becomes every discussion of the subject to deal with the facts without passion or prejudice, without resentment, and to avoid the building upon half truth.

I am fully persuaded that the tendency so far as we can judge from what we know looks ill for the future of the negro, but I am also certain that we are not in possession of all the facts.

The supreme duty of those who are interested in the problem is to gather the facts, all the facts, and nothing but the facts; the most necessary in the present stage of investigation are those

that deal with the actual condition of the country negro. We might hope, perhaps, that in the preparation for the census of 1910, the government would undertake to gather exact information over a territory large enough to warrant the drawing of safe deductions, at the expense of superficial and inaccurate statistics of the entire area of negro occupation.

Meanwhile, we are bound to believe the best; to work along those lines which we would surely do if we *knew* instead of only hoped, that our toil might result in a complete victory.

I see everywhere signs that the best people among the negroes are more and more restless under the stigma which their degenerates and criminals cast upon the whole race, and as they seek moral regeneration among themselves, they should be helped, sustained and comtorted by the Anglo Saxon—from whose ranks, in the far South at least, for which only can I speak, they have always drawn their truest friends.

THE NATION'S OUTLOOK FOR HEALTH.*

BY WALTER LINDLEY, M.D., LL.D., LOS ANGELES, EMERITUS PROFESSOR OF GYNECOLOGY, COLLEGE OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

No report on the outlook for health would be complete without a statement of the part vermin and insects play. They are the great emissaries of disease and death. The economical damage by rats is immense. Rats destroy grain and other products in England and Germany alone to the amount of \$150,000,000 per year. On both land and sea they are a terrible tax upon man.

RATS AND FLEAS.

This evening we are considering health and disease and it is the relation of rats to these that particularly interest us.

The rat is subject to bubonic plague

and, through the flea, and directly, is the chief, but by no means the only, disseminator of this disease. The rat has the disease and when it dies and gets cold the flea searches for warmer quarters, finds a live man and bites him. The cycle is thus complete. This same rat's dead body decays and becomes a part of the dust of the street and the coolie becomes infected through his toes and feet.

Is the bubonic plague a terrible disease?

In 1896 there were 1704 deaths in India from the plague. The death rate increased until in 1904 the mortality

^{*}Address delivered before the National Conference of Charities and Correction by Dr. Lindley, Chairman of the Committee on Public Health, at Richmond, Virginia, Monday, May 11, 1908.

from the plague in India was 1,022,000 and the total number of deaths in India from the plague from 1896 to 1906, inclusive, was 4,410,000; an average of over 400,000 per annum. To add to the rat menace is the fact that it is so pro-The rat begins to bear young when six months old and one authority says that rats multiply at the rate of 800 descendants yearly from one pair. Besides the usual means of destroying rats a bacteriological preparation known as "ratin" has been prepared in a German laboratory. Societies for the eradication of the rat have been organized in various European cities; the latest being in Copenhagen and London.

THE FLY.

The fly is another menace to health. It carries typhoid and tubercle bacilli and other infectious bacteria and distribute them over the food. One investigator found 100,000 bacteria on the legs of one fly. Dr. Daniel D. Jackson says the common house fly causes 7000 deaths annually in New York City.

So do not sit complacently by while the fly walks over the sugar that you soon after spread over your breakfast food or strawberries. This is an adulteration that the Pure Food and Pure Drug Law cannot reach. Fight the fly personally, with screens and fly paper, and have the food they desire as inaccessible to them as possible. That great breeding place for flies—the manure pile—is, we are glad to say, being supplanted by the automobile.

The bed-bug plays an humble part in carrying the plague, and must undoubtedly admit its inferiority to the flea.

THE MOSQUITO.

The mosquito is the carrier, the distributor, the Pandarus of Elephantiasis (filariasis,) Malaria and Yellow Fever. As the war of extermination against the mosquito progresses, the death rate from Malaria and Yellow Fever declines. Havana—where Dr. Walter Reed fell a

martyr-under the vigorous American administration, with the impetus given by the big stick, is an example of what can be done toward wiping out yellow fever. The elimination of the mosquito does the work. The United States census tells us that in the year ending May 31, 1889, there were in this country 18.504 deaths from malaria and that during the next ten years the mortality from that cause was only a little more than one-third as great. Dr. Edward A. Avers of New York advocates the drainage of all swamps and the use of kerosene, tersely putting it as follows: "A slap at the mosquito for the moment, kerosene for the week, ditching for a season, but reclamation for all time." In the far West the desert must be reclaimed by putting water on it and, thanks to the big stick, thousands of acres of fertile fields and fruitful orchards are refreshing the eye where the pioneer of '49 and his faithful horses and cattle, after vainly following the mirage, died from thirst. This is important but, from the sanitarian's view point, the reclamation of the swamps that is progressing in the Middle West, the East and the South is doubly important.

Here is a place for the exercise of governmental paternalism.

THE DOG.

The dog is susceptible to many diseases. The two we, as sanitarians, are interested in are hydrophobia and tape worm. It is of the latter that I speak. The dog eats raw meat, gets the tape worm in its larval state from the beef, and within the dog it develops the adult worm. From intimate association the eggs of this worm infects the child or the man. In Lapland, where dogs and men live in close intimacy, tape worm is very common.

One form of tape worm is found only in children, due to the fact that dogs caress them with their tongues. THE CAT.

The cat is the greatest menace of all domestic animals.

As a cat fancier said to me a few days ago, "there is scarcely any disease that the cat does not have."

Diphtheria and ringworm are the two diseases that it ordinarily disseminates. One cat has been known to distribute diphtheria among the children of a whole neighborhood.

Ringworm, the scourge of the school and the orphan asylum, is usually intro-

duced by the cat.

Under my own observation recently a man and his wife, both well-known artists, became infected with ringworm and discovered that it was from a beautiful cat of which they were very fond. The children in three neighboring families contracted the disease from this same cat.

In fact the only innocuous domestic pet is the Teddy Bear.

If you must have a dog or cat in the house, you should realize that to keep it clean and well it requires more attention than is necessary for a child. One mother understood this. She said to her maid:

"Mary have you a bottle of milk for baby and a bottle for Fido?"

"Yes, Mam," answered Mary.

"Sterilize Fido's," said fond Mama.

BIER'S HYPERAEMIA.

Two therapeutic advances I will now mention.

Bier's Hyperaemia is a method of treatment of rheumatism and other diseases of the joints. It has been developed during the last twenty years by Prof. August Bier, now of Berlin, formerly of Bonn. The results seem almost miraculous and, as this method becomes universally known, it will make a marked reduction in the number of hopeless cripples. This hyperaemia is produced in three ways: First, by hot air, by putting the affected joint or, pre-

ferably, the whole body, leaving only the head exposed, in what is practically a bake oven. The temperature is raised from 250° Fahrenheit to 510° Fahrenheit.

Second, by using elastic bandages around the affected joints.

Third, by use of suction cups over the affected joints.

VACCINE THERAPY.

The other great advance is in vaccine therapy.

Vaccination against smallpox was proclaimed by Jenner 110 years ago; while Pasteur presented us with vaccination for hydrophobia just a quarter of a century ago.

Principally through work done in the laboratory of Sir Almroth Wright of London, we have, in the last few years, learned that other infections as well, especially those caused by the bacteria that produce pus, may be successfully treated by vaccines. We are all infected every day but we have within us cells known as phagocytes that maintain a constant warfare against the invading bacteria and these defenders are generally victorious.

Besides these phagocytes, there are in the blood substances called opsonins that unite with infectious bacteria and make them more susceptible to the protecting phagocytes. Where these opsonins are deficient, say in a case of puerperal fever, or any other virulentpus forming disease, a pure culture of this organism is obtained from a patient suffering from the disease that it is desired to cure. Frequently and preferably this culture is taken from the same patient. These cultures are grown in the laboratory, then killed by heat, diluted to the proper dosage and injected back into the system of that patient, reinforcing the opsonins and making the virulent bacteria weak, and vulnerable to the phagocytes. The theory of this is that you put back into the system a weak poison as a stimulant, just as small doses of other poisons act as stimulants; take strychnia as an example of this in the vegetable world. The results of this vaccine therapy are so wonderful, the recovery of the patient so prompt, that it is almost incredible. Every municipality should have a laboratory where this opsonic work could be carried on without cost to the indigent patient, and where these vaccines could always be found fresh.

CEREBRO-SPINAL-MENINGITIS.

The most hopeless, deadliest and most terrible disease we have to contend with in America is cerebro-spinal-meningitis. Encouraging reports are now coming in of the use of an anti-serum being made by Dr. Simon Flexner, working in the Rockefeller Institute, New York. The latest summary shows 130 cases of cerebro-spinal-meningitis treated by Flexner's anti-serum with 95 recoveries.

THE TEMPERANCE MOVEMENT.

Now a word about the great temperance movement that is agitating the civilized world.

The Japanese say a man takes a drink, then the drink takes a drink, then the drink takes the man. A realization of the injury that alcoholic beverages are doing to their respective nations has led the scientists and publicists of France, England and Germany to join in a propaganda against King Alcohol, whose throne is now tottering.

It is in the United States where the temperance movement is seen in its most aggressive form.

Over forty million people in this country, that is, one-half our population, are today living under prohibition laws. Why? Not because the majority of us are at heart prohibitionists, but because the saloon element combines with the most undesirable people of the city and form a political organization that has become insolent, arrogant and sinister. This has gone on to such an extent that a majority of those desiring good gov-

ernment have decided that the only way to secure an honest administration of municipal affairs is to eliminate the saloon, and it looks as though the silent ballot would do the work. The city of Los Angeles is wedded to high license. The number of saloons is limited to 200, each one paying a license of \$000 per year. Riverside, Redlands, Pasadena and several other Southern California cities have had prohibition from the date of their organization into municipalities. Adolph Busch of Anheuser fame has a beautiful home surrounded by a tropical park in prohibition Pasadena.

The cherry looks nice in the bottom of a glass and there is something very attractive in the vivid green of the mint as it projects from a long goblet on a hot day, but it looks as though we were going to soon have an opportunity to renew the experience of our boyhood days when our principal beverages were sassafras tea and buttermilk.

CANCER.

Just a word about cancer. In 1890 there were 9410 deaths from cancer in the United States; ten years later—1900—there were 17,296 deaths from cancer in this country, an increase of 12.1 deaths per 100,000 population. In England and Wales in 1899 the death rate from cancer showed an increase of 15.3 per 100,000 over the rate of 1890.

Reports from all over the world indicate a steady increase.

Aside from the knife in early cases, all remedies tried have thus far proved of no avail. Recent investigations point to the fact that cancer is decidedly infectious and that this disease is carried both by dust and water. Epidemics of cancer have been reported in different localities within the last few years. This field is awaiting the advent of a new Jenner, Pasteur or Koch. How glorious it would be if he prove to be an American!

PULMONARY TUBERCULOSIS.

Pulmonary tuberculosis, the disease which, in 1800 and for decades before, had shown the greatest death rate in America of any disease, in 1900 fell to second place. In 1890 in the United States out of every 100,000 population there were 245.4 deaths, while in 1900 there were 191.9 deaths from consumption in every 100,000 population. This shows a decrease in the annual death rate of 53.5 to every 100,000 of population. The death rate in England and Wales from tuberculosis in 1838 was 399 for each 100,000 of population; in 1882 it had fallen to 180 for each 100,ooo of population, while in 1906 it had fallen to 115 deaths from consumption in each 100,000 of population. heart, my friends, intelligence, diligence and altruism will surely conquer this deadly foe of the human race. Great things were expected from tuberculin which Koch announced in 1890. Modified in various ways, it is being used today in the treatment of tuberculosis by many earnest optimists, but it has had little to do with the remarkable reduction in the death rate. Tuberculin will yet be modified and improved by the untiring research that is now going on in our laboratories, co-ordinating with the clinical work in our sanatoriums and dispensaries. Every incipient case of consumption should, for at least a few weeks, go to a sanatorium, as a child goes to school, and After once learning then this patient can arrange for his own care in his own home. In case of dire poverty, of course, the patient should remain in the sanatorium until cured. Fresh, pure air; sunshine, eggs and milk, together with the use of tuberculin in suitable cases, form the basis of all successful treatment of tuberculosis. There is one book-just a little book-that costs 15 cents a copy by the hundred, entitled "Tuberculosis, a Disease of the Masses, How to Combat It," that sould be a text-book in every grammar school and every night school. It should be on all public reading tables. This work is by Dr. S. A. Knopf of New York, and has been translated in twenty-two different languages. It is a great missionary.

THE PLAYGROUND MOVEMENT.

A great factor for health, a comparatively new feature in our city life, is the playground movement. This educated, intelligently directed movement has spent in New York City during the last eight years, about \$15,000,000. In Chicago during the last three years, \$11,000,000. Boston was the leader in this work and has an ideal system of playgrounds, municipal baths and gymnasiums. Every other progressive city in the United States is following in the wake of these leaders. Through pride in my own city I would like to point in detail to the work done under the direction of the Los Angeles Play Ground Commission, of which the able President is a woman.

This playground movement is doing more than all drugs in the fight against tuberculosis. It begins at the beginning—with the child—teaches it chest expansion, and makes it a lover of fresh air and an outdoor life.

THE NATIONAL FOREST.

The national playground is our national forest reserve, and will prove a most potent factor for health. power of the big stick was never used with more far-reaching results for our good than in placing our great but rapidly decreasing forests under the permanent control of the national government. We have in the United States 150 national forests containing 142,972,-855 acres; in Alaska 4,909,880 acres; in Porto Rico 65,950 acres. President Harrison in 1891 created the first one, the Yellowstone Park. The national forest regulates water flow and thus holds the soil, and furnishes timber and

wood for legitimate and reasonable purposes. The forage and the timber of the national forest are to be used, but with regard for tomorrow. Nationalizing these vast mountain regions makes them far more valuable and keeps them far more valuable simply by using them in a careful way, with a thought for the future. These forest lands will be managed so as to produce the most valuable crops of timber and wood, year after year, without interruption. Protecting the forests and the undergrowth insures a steady flow of water for irrigation in the otherwise arid tributary valleys.

If the mountain side has been made barren by ax and fire, the water runs down its barren, hard surface with a rush, all at once, ruthlessly flooding valleys below. But the protected forest cover-the trees, brush, grass, weeds and vegetable litter-act together as a great regulator, bringing about a steady flow of water. Preserve them as great playgrounds for the people. Encourage families and schools to camp a part of each year by the glorious mountain stream under the firs and the alders. These national recreation grounds will be a force in fighting disease. Health is to be found in the heights among the pines and the cedars. Let us keep them forever free for all the people.

THE TRAINED NURSE.

In 1853 Florence Nightengale in London gave an intelligent impetus to trained nursing that has been felt all over the civilized world. In 1873 Bellevue Hospital, New York, sent out the first class of trained nurses graduated in America. In 1880 there were in the United States 15 schools for nurses and 300 pupil nurses. In 1907 there were 862 schools for nurses in this country and nearly 20,000 pupil nurses. This is another great factor that is telling for

good health. The graduate nurse, with her education and her sanitary conscience, is a harbinger of right living. If she does happen to marry soon after she has received her diploma she is ideally equipped for wifehood and motherhood and is a source of comfort and helpful wisdom to all her neighbors. This is truly woman's profession and the time will yet come when all wise parents will want their daughters educated in the elementary steps of nursing.

Your committee believes that this very incomplete annual resume shows great progress and points to a far lower death rate and greater longevity in the near future. Centenarians are getting common, while the great, great grandmother of 95 is far from a novelty. With all the factors at work that have been here pointed out, and many others that time would not permit mentioning, the year 1950 will show as many people living happily and intelligently at the age of 100 years as live now to be 75.

THE PURE FOOD AND PURE DRUG LAW.

Still the greatest step taken toward the preservation of health and the increase of longevity during the past year has not been referred to.

Maeterlinck says: "A man who is good attracts, with irresistable force, events as good as he." In something the same way the man in Washington with the big stick seems to attract to himself men who carry some very formidable sticks of their own. This evening it is our great privilege to hear about the Pure Food and Pure Drug Law from the man who was present at its birth and prevented it from being still born. I take pleasure in presenting the Chief Chemist of the United States Bureau of Chemistry, Dr. H. W. Wiley, who will now address you.

ACCOUCHEMENT FORCE.

BY EDMUND MYER LAZARD, M.D., LOS ANGELES, INSTRUCTOR IN OBSTETRICS, COLLEGE OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

By accouchement forcé, or forcible delivery, we understand the artificial dilatation of the os, followed by immediate extraction of the child. This operation is indicated whenever conditions arise which demand the speedy termination of pregnancy. This may be before the normal forces of labor have begun to act or when, because of some pathological condition in the lower uterine segment, the ordinary course of labor is fraught with unusual dangers. The operation may also be indicated after labor has begun. when the normal forces are inefficient in producing the necessary dilatation for evacuation of the uterine contents. The operation, then, is one in which nature's dilating forces are almost entirely supplanted by the forces of art and in which time is an essential factor in the successful termination of the case.

In the first class of cases which demand this operative interference, viz., where it is necessary to rapidly terminate pregnancy before the beginning of labor, we have cases of advanced constitutional diseases of the mother, such as serious cardiac disease with broken compensation; advanced tuberculosis; pernicious anemia and acute odema of the lungs, in all of which the patient is not in any condition to stand the strain incident to a spontaneous delivery. We also have those occasional cases of the premature separation of the placenta retro-placental hemorrhage, in which both mother and child are endangered, the one by hemorrhage and the other by asphyxiation. Prolapse of the cord may also necessitate rapid delivery to save the life of the child. Probably the most frequent indication for this operation is given by that very grave obstetrical constitutional disturbance, puerperal-eclampsia. On this point there is a very great difference of opinion, as some advocate medicinal treatment with

at most application of forceps when the proper amount of dilatation has been spontaneously secured; others the induction of labor by packing, by the bags of Champentier de Ribes, or the Voorhees modification, and still others advocate accouchement forcé. Where the preeclamptic state has been recognized and in spite of proper treatment the condition has so far advanced that operative interference has become necessary. I believe that nothing short of accouchement forcé should be considered. In these cases everything has been done to avert the impending catastrophe and yet the patient has come to the verge of an eclamptic seizure; so it is of the greatest importance not only to terminate pregnancy as quickly as possible, but also with the least nervous shock possible. Any method which depends on reflexly exciting uterine contractions with the patient awake to bring about the necessary dilation is, I believe, absolutely contra-indicated, as the additional nervous stimulus may be sufficient to precipitate the seizure which we are endeavoring to prevent by our operative interference. Such operations as packing the cervix, introduction of the Barnes', Ribes' or Voorhees' bags are included in this class. The bag dilatation has many eminent advocates and is practiced in many large maternities with very good results. Nevertheless, I believe the practice is not the best for the reasons given above, and I think with accouchement forcé properly executed, the results in a large series of cases would be far better, both as regards mortality and morbidity.

In the second class of cases, viz.: those in which the normal course of labor is fraught with unusual dangers or the normal forces have proven inefficient, we have placenta previa, rigidity of the cervix from specific trouble and in old

primiparae, and cicatricial contractions of the cervix.

The methods of performing accouchement forcé are the manual of Harris or Edgar, instrumental dilatation, or opening of the lower uterine segment by cutting operations, such as the deep cervical incision of Duhrssen or the same operator's so-called vaginal Caesarean section. Dilatation may also be effected in certain cases by puncturing the membranes and thus allowing the head, if it be the presenting part, to enter. By the greater pressure exerted dilatation may be more rapidly brought about, but this method is at best very uncertain. It should be reserved for cases of partial placenta previa where rupture of the membranes may allow the head to enter the pelvis and thus tampon the bleeding placental site. The hemorrhage being thus stopped, the necessity for rapid delivery will be overcome, and the procedure then is not so much one of accouchement forcé, as one which furnishes a rational treatment for placenta previa-

If this method is not successful, version by the Braxton-Hicks method fulfills the indications as it also causes entrance of a presenting part which would tampon the bleeding site, and at the same time furnishes a means of dilating the os.

The choice of method of performing accouchement forcé is largely a matter of individual preference based on experience. Probably the most popular one is the manual method of Harris. This is most applicable and gives the best results where labor has already begun and upper portion of the cervical canal is obliterated. If these conditions are not fulfilled, the operation becomes very difficult. If too much brute force be used in securing the dilatation, there is great danger of deep cervical tears, or even of tearing into the lower uterine These remarks apply, however, to any method of dilatation and in my opinion, equally to all. As to the technic of manual dilatation, we, of course, must start out with the most scrupulous asepsis and maintain it throughout the operation. The patient should be thoroughly and deeply anaesthetized. One hand thoroughly anointed with sterile vaseline is introduced into the vagina and the index finger carried up into the cervical canal and through the internal os. If the os will not admit the finger, a Goodell dilator may be used to begin the dilatation. After the index finger has passed the internal os, the thumb is pushed past it with much the same motion as used in snapping the fingers. This gradually dilates the internal os and the cervical canal. The other fingers, the third, fourth and fifth are successively and gradually passed in as the dilatation proceeds. After the internal os is effaced, the rest of the dilatation is easily and rapidly completed. It is said that in appropriate cases dilatation can be completed within a half an hour from time that the os admitted the index finger. After the entire hand is introduced, some close the fist and by pulling down with the closed fist, reverse the direction of the dilating force; that is to say, they bring the force to bear from above downward, the same as nature's force. When the closed fist can be readily withdrawn through the os, they consider the dilatation complete. This would seem to have the objection, as stated by Edgar, of tending to displace the presenting part and not only interfere with its entrance, but favor the occurrence of malpresentations. Edgar and Bonnaire favor the bi-manual dilatation in which both hands are used. simultaneously. An index finger of each hand is introduced and makes traction in opposite directions. As dilatation progresses, the middle finger of each hand is successively introduced and traction continued. This does not seem to be as good a method as that of Harris, because, as Williams objects, one hand must come into intimate contact with the anus, and there is very great danger of infection. Beside this, the force

is applied more or less along a straight line and as the force of both of the operator's arms can be brought to bear, it would seem to me that there would be far greater danger of serious tears than in the Harris method, where the force is exerted around the circumference and only the force of the hand is available.

The great objection, to my mind, to any manual dilatation, is the fact that where it is at all difficult or prolonged, it tires the operator's hand to such an extent as to unfit it for further use, or, at least, sufficiently to handicap the operator seriously in the further work necessary for the delivery. This would seem to apply more especially to the Harris method. I am free to admit this objection is wholly theoretical on my part, as I have never done a manual dilatation. and I never expect to as long as I have an instrument with which it can be done. The type of instrument of this kind is the Bossi dilator, which I first saw used by Leopold in his Frauenklinik in Dresden, in 1901, when he was introducing it to the German profession. Since then there have been several modifications of it and a great deal of discussion, pro and con, of its merits. The bulk of American opinion seems to consider this instrument a very dangerous one, because of its latent power, and the great danger of serious tears if it be improperly used. This objection is a valid one if the dilatation be too rapidly done, but this is equally true of any method, and the force can be as accurately gauged and controlled by the Bossi dilator as with the hands. It has been argued that the hand of the operator is better able to judge of the amount of force used than is a metal dilator. This is perfectly true, but a hand partially paralyzed by being cramped up in the vagina, or in a slowly dilating cervix, cannot be as good an indicator as a couple of fingers palpating a cervix stretched over a dilator. Furthermore, the force exerted by the dilator is more equable and not of as spasmodic a nature as that exerted by muscular action.

The advantage of metallic dilatation other than the great one of its being readily accomplished without tiring the operator, is the fact of its being possible to render the dilator absolutely aseptic and of keeping it so throughout the operation, which is not the case with the hands. It has been said that with a long rigid cervix, rapid metallic dilatation is contra-indicated as it involves the danger of serious tears. This I believe to be true of any method of rapid dilatation, manual or metallic, for with given cervical conditions to overcome, the danger does not depend so much on the method of accomplishing it, as on the time taken. The latter has the great advantage in these cases of the possibility of being applied for a longer period of time without tiring out the dilating force.

In placenta previa, metallic dilatation should not be used because of the great friability of the tissues and the continual hemorrhage. In these cases, sufficient dilatation to bring down a foot can be rapidly accomplished with the hands, and thus the bleeding is controlled; the presenting part then continues the dilatation.

The technic of the Bossi dilatation is very important if good results are to be obtained. After the usual aseptic preparations have been made, the cervix should be exposed by means of a speculum and it should be held down with a tenaculum. If the os will not admit the tip of the closed instrument without the caps, dilatation should be started with the fingers and a Goodell. When sufficient dilatation has been reached, the tip of the closed instrument should be inserted and dilatation continued under constant control of the fingers. soon as the os is sufficiently dilated to admit the tip of the closed instrument with caps, the instrument should be closed, removed, the caps put on and the instrument reinserted. The time of

the operation should be kept by the watch and there should be a pause of at least five minutes after each full turn of the wheel. Before beginning each turn, the rim of the cervix should be carefully palpated to avoid making undue tension, and also be sure that each tip is well within the cervical ring. If these precautions are followed, one need never have a tear of any extent in the. cervix. With an ordinary cervix, complete dilatation can be accomplished in one-half to three-quarters of an hour. If there be any pathological rigidity. more time will be necessary. One would think that cicatricial contractions of the cervix would contra-indicate metallic dilatation because of the danger of tearing. This I know to be erroneous, because the most brilliant result I ever saw attained with a Bossi dilator, was in just such a condition. The case I saw with Dr. Coffey in the outdoor clinic at the U. S. C. Medical College. It was in a Mexican woman who had been delivered instrumentally a few years before. After she had been in hard labor twenty-four hours, an examination revealed an extensive cicatricial contraction of the cervix. There was no posterior lip to the cervix, it had all been torn away; the posterior vaginal wall uniting with the lower posterior uterine segment, and it was drawn up into a puckered cicatricial mass. The anterior lip was also one mass of cicatrix, and the part representing the os seemed as though it were drawn together by a pursestring suture. At this time, after twenty-four hours of labor, there was only sufficient opening to insert the edge of a finger nail. Manual dilatation was out of the question and it was thought a difficult cutting operation would be the only way the patient could be delivered. Caesarean section was excluded because of the great probability of infection, the patient having been repeatedly examined in very poor surroundings. Before proceeding to a cutting operation, Bossi dilatation was

tried, tentatively. I confess I was very skeptical about the possibility of delivering the patient in that manner. After sufficient dilatation had been secured by the fingers and a Goodell, the Bossi was introduced and the dilatation begun. It required about two hours to secure complete dilatation. At the end of that time. forceps were applied and a living child delivered. The only mishap occurred in the last half hour of the operation, when the posterior blade of the dilator slipped off the cicatricial band at posterior uterine segment, and with the next turn of the wheel, tore a hole into the posterior vaginal vault. This was very soon discovered and the error corrected. The tear was not a large one and was easily brought together with three sutures. In this case there was very much less tissue torn than would have been the case had a cutting operation been done.

We have yet to consider the cutting operations in the performance of accouchement forcé. There has been a prolonged and acrimonious debate between Duhrssen, the originator of the cutting operations, and Bossi, as to the relative merits of the two methods. Duhrssen would concede no place at all to the Bossi dilator, and Bossi contends that his method could, with advantage, replace the cutting operation in almost every instance. The truth probably is that each has its place in properly selected cases. It would seem to me that the Duhrssen method is essentially that of the operating gynecologist, while the method of Bossi is essentially an obstetrical one. To perform Duhrssen's operation, one must have considerable skill in vaginal operative work, should operate in a well-equipped hospital and with trained assistance; for the Bossi dilatation one need have only the ordinary amount of skill, but must have the obstetrician's disregard of time. It is true one should be prepared to sew up any tear which he might get, but this is far different from having inevitably to sew up a number of tears or cuts which

he has to do in Duhrssen's method. I have done a Bossi dilatation in a small shanty on a kitchen table, on the outskirts of town with only a doctor to give the anesthetic, and a nurse to help. This went without mishap of any kind. I am quite sure I would never attempt a cutting operation under the same circumstances.

Another disadvantage of the cutting operation, either the deep cervical incisions, or Duhrssen's so-called vaginal Caesarean section, is that one never knows how much farther the incisions will tear when the child is delivered either by forceps or by version.

In conclusion I can do no better than to quote Edgar, who says, "When one hears a sweeping condemnation of this or that method of cervical dilatation, as with steel dilators of the Bossi type, or by vaginal Caesarean section, it is fairly certain that the one making such a statement fails to appreciate the varying cervical conditions and the value of the procedures, or has not had sufficient experience with them." In the same article he says also, "Previous to the introduction of the Bossi type of dilator, I incised a number of cervices by both superficial and deep incisions. Since its introduction I have cut very few cervices."

. With regard to deep cervical incisions. Williams says, "It requires considerable surgical skill, and not to be recommended save under exceptional circumstances." It is occasionally indicated in concealed hemorrhage, when prompt evacuation of the uterine contents is imperative to save the life of the patient. in whom the consistence of the cervix is such that rapid manual or instrumental dilatation appears impossible. other conditions, however, it cannot be looked upon as a justifiable procedure, a remark which applies also to Duhrssen's ,so-called vaginal Caesarean section." I should add that in Williams'

last edition of his work, he gives a greater place to vaginal Caesarean section. In cases where rapid delivery is indicated and the cervix is undilated and rigid, he considers it "far superior to brutal attempts at manual or instrumental dilatation."

Finally to sum up, I believe that in the presence of conditions necessitating rapid delivery, metallic dilatation, properly and carefully done, can with advantage replace both manual dilatation and deep cervical incisions. The advantages over the former method are that it can be done over a prolonged period of time, i. e., for one and a half to two hours, without tiring out the dilating force, and absolute asepsis of the dilating instrument can be maintained; and it is superior to the latter method, in that it does not require as much technical skill nor the luxuries of a well-appointed hospital; and if properly done, it will result in far less tearing and wounding of tissue. This, of course, does not include cases of placenta previa where the little dilatation necessary can be rapidly accomplished manually.

In that small class of cases, with long rigid cervices, where delivery is imperative, manual and metallic dilatation and deep cervical incisions are all alike dangerous because of the brute force necessary, and the danger of deep tears. In these cases where a competent operator and proper facilities are available, vaginal Caesarean section will find its place, although it is a question in my mind, whether in the presence of these conditions and absence of contra-indications, a classical Caesarean section would not be preferable.

As to bag dilatation, I believe this is not, properly speaking, accouchement forcé and should be more properly considered as a method of inducing labor, or of assisting the normal forces of labor where haste is not necessary.

611 Lissner Bldg.

TREATMENT OF GONORRHOEA IN FEMALES.

BY ALFRED J. DOWNS, M.D., LOS ANGELES, CAL.

The treatment of gonorrhoea is usually unsatisfactory, and if not seen early, the uterus and its appendages are almost certain to become involved. In acute cases rest in bed is essential, and on account of the pain in many cases it becomes compulsory. A month spent in bed at the onset of the attack will not be too long, and it would help immeasurably to shorten the attack and prevent complications.

Very large douches of pot. permang. solution should be given twice daily; three to five gallons of hot water should be used. Insist on the recumbent posture and that the water be very hot, with the douche can just high enough so the water will run slowly. To accomplish this in the best manner an ordinary kerosene can with the rubber tubing attached to the faucet can be used. The precautions ordinarily given to the male patient should be given to the female. She should be instructed as to the danger of carrying the infection by the fingers to the eyes or to the rectum, and also as to the likelihood of children contracting the disease from sheets, towels, slop jars or bedroom chambers, or, if she takes enemas, she should be warned of the danger of carrying the infection by means of the enemata tip, to the rectum. Of course, no other member of the family should use her douche tip, but if she be not cautioned some innocent party is likely to suffer. If there be any vesical or urinary symptoms the balsams may be given throughout the attack, or alkalies may be administered, such as pot. citrate. The diet should be restricted; no highly seasoned foods or liquors can be allowed. She must abstain from intercourse. Clean sexual washed clothes, or better still, sterile pads, must be worn renewed as soon as soiled, and the soiled ones burned. By this precaution the involvement of the glands of Bartholin will be prevented. Abscess of the glands usually comes on during the last weeks of the attack and is the result of allowing the discharge to remain over the mouths of the ducts until it becomes ground into the glands. When abscess does occur, it should be opened, thoroughly drained, and its cavity cauterized with carbolic acid.

Local treatments, two or three times weekly, or every day, if the patient can come to your office, should be given. The patient is placed on her back and a folded sheet is put under her buttocks to prevent stains from getting on her clothing. The external genitals should be cleansed with warm water or boric solution, paying particular attention to the mouth of the urethra. Now take a small hand syringe, the kind used in giving injections to men, fill the vagina some antiseptic solution,—as argyrol 20%, or perovide 50%. If the syringe be inserted deeply into the vagina and the solution thrown in slowly, quite a large quantity will remain in the vagina, providing the perineal muscles are intact. The solution is allowed to remain in contact with the vaginal walls and cervix while you are proceeding with the treatment of the urethra. If the urethra is not sufficiently cocainized by the small pledget of cotton which you have placed there, twist some cotton on an applicator, saturate with cocaine solution and insert gently into the urethra. You may then insert a female urethral speculum and cocainize deeper, if necessary. All parts of the canal are now touched with silver nitrate solution, from 3% to 30%. As you remove the speculum observe Skene's glands. If the mouths seem diseased, probe them to the bottom with silver nitrate solution. One of my cases which had extensive hemorrhages from

the neck of the bladder, yielded quickly to one application of silver nitrate.

Now, to resume the treatment of the vagina: With the fingers of one hand push the labia apart and catch the escaping solution with absorbent cotton. Insert the vaginal speculum and swab out the canal of all discharge and solution. With cotton twisted on an applicator go over the cervix externally and internally as far as the internal os with 10% silver nitrate. If the infection has penetrated deeper great care must be taken with antisepsis, as making applications to the interior of the uterus is fraught with danger. Next, go over the vaginal walls, ending by inspecting the glands of Bartholin and making applications to their ducts, if necessary. If the infection has extended beyond the uterus into the tubes and ovaries, rest in bed, very large hot douches (as described above), heat to the lower portion of the abdomen, morphia to relieve the pain, and saline cathartics given frequently to relieve the pelvic congestion, will help to keep the infection within the pelvis. An operation may be necessary to relieve the condition, if, after the subsidence of the acute attack, pain continues or abscess forms. But this does not fall under the treatment of gonorrhoea.

Children are very susceptible to gonorrheal infection, and very frequently contract it from bed clothing, slop jars, etc. One child admitted to a children's ward may be the means of spreading the infection to a very large percentage of other children. In one hospital in

New York twelve per cent of the children were found to have gonorrhoea. I have had two cases recently, one contracted by a child using a slop jar that a gonorrheal boarder had used, the other probably through the bed clothing, as the mother had an old case and the child was in the habit of sleeping with her. The doctor should give all the treatments to children, because if left to the mother or nurse, the treatment will be unsatisfactorily carried out. Cocainize the parts first by applying small pieces of cotton saturated with cocaine solution, Irrigate the vagina with pot. permang. 1-4000, by means of a small rubber catheter attached to the syringe. The tip must be inserted just within the hymen. If the trouble does not abate local applications of silver nitrate solution can be made to the vagina. The little patient is placed in the knee-chest position, with the parts well cocainized and a number ten Kelly speculum is inserted into the vagina. With the child in this position all parts of the vagina and cervix are painted with silver nitrate solution, strength varying from 3% to 30%. according to your judgment.

The use of vaccine in acute cases has proved worthless. The only place it can be adopted is in chronic cases, gonorrheal rheumatism, pus tubes, etc., yet in these cases it is in but the experimental stage. The vaccaine is difficult to obtain owing to the facts that the culture is hard to grow and each culture must be grown from two to three months.

O. T. Johnson Building.

DERMATITIS EXFOLIATIVA NEONATORUM—REPORT OF CASE WITH RECOVERY.

BY U. G. MILLER, M.D., LOS ANGELES, CAL.

Mrs. J., age 17.—Primipera, gave birth at full term to male child on April 10th last. Her father died at the age of 32 from pneumonia; her mother, still living, aged 32, and in good health.

Mother of child had always enjoyed good health, diphtheria being the only serious disease she ever had. She had never had any skin disease. She was well during entire pregnancy. Labor

began at 3 a.m. and progressed normally; child delivered at o a.m., labor being comparatively easy. The child was well developed and weighed 9 pounds. It cried lustily immediately after delivery, but it was somewhat cyanotic. The cord was pulsating strongly and several minutes elapsed before it was tied. cord was treated in the usual way and it separated on the fifth day, there being a slight discharge for a short time. The cyanosis gradually disappeared within an hour after birth. The child was well until the sixth day when an erythema around the mouth and on the chin was noticed. This rapidly extended over the entire body and looked very much like the rash of scarlet fever, though of a deeper scarlet color (a dark purplishred would more properly describe it). The child became very restless, slept for only short periods at a time and, when awake, cried almost constantly. It vomited frequently after nursing, but bowel movements were normal. Mucous membranes of mouth and nose were of purplish-red color; conjunctivae of eyes injected; temperature on second day of illness was 103°; the skin of the entire body had the appearance of an intense inflammation. Small papules appeared around the mouth and over various parts of body, but principally about flexor surfaces-some of which developed into vesicles and a few into very small pustules. There were two ulcers, each about the size of a bean; one was behind the left ear and one in axillary There was no exudation or weeping except over flexor surfaces and very little there. About the sixth day of the illness desquamation or rather an exfoliation of the skin commenced around the mouth, the part first affected, but, like the beginning, inflammation. The entire surface of the body was soon involved in the exfoliating process, except the scalp, where it was more of a desquamation. The exfoliation was rapid, the epidermis coming off in ribbon-like bands or in patches, leaving a highly inflamed but no excoriated surface, which gradually became normal in appearance. The exfoliation was complete except on the scalp by the tenth day. As the exfoliation progressed the fever subsided, the restlessness and acute symptoms improved and recovery was complete in about two weeks.

SYNONYMS—RITTER'S DISEASE: KERATO-LYSIS NEONATORIUM.

Definition: Dermatitis exfoliativa Neonatorium is defined as an acute disease of infants accompanied by few constitutional symptoms characterized by an erythema and turgescence of the skin with a variable amount of exudation followed by exfoliation of the epidermis. It is a very rare disease. Ritter was the first to describe the disease in 1878. It is not to be supposed, however, that the disease did not exist prior to that time.

Aetiology: The specific cause of the disease is obscure. It is supposed by some to be autotoxemic. It seems to have some connection with the infections common to the puerperium, as cases usually occur within the first week or two after birth. It is also thought by some that the infecton takes place in-utero. I may mention here, that the mother of the child in the case developed a temperature on the seventh day after confinement, but in the absence of symptoms pointing to septic infection, her illness was probably due to loss of rest and sleep, and worry on account of the baby's illness.

Ritter thought the disease was of pyemic origin, but this view is not approved by later observers.

Riehl thought it due to a fungus which he found in two cases.

Winternitz found staphylococcus pyogenes aureus and albus in the blood in one of his cases.

In Ritter's institution the disease was epidemic, thus indicating a contagious or infectious nature, but later authorities consider it neither contagious nor transmissible.

Hardy in 1851 described a disease

which he named erythema scarlatinoides. Later Bazin gave to it the name of erythema scarlatiniforme. It is no doubt the same disease as that under consideration; in fact, some writers use the terms interchangeably.

Symptoms: Symptoms are as given in the above case and need not be repeated, as this was a very typical case.

Diagnosis: The diagnosis is easy; the greatest difficulty is in remembering and calling to mind such a rare disease. However, the following diseases must be excluded: Pemphigus neonatorum, arythema, erysipelas, acute eczema and scarlet fever. With the exception of pemphigus, these diseases are all so familiar and present such characteristic symptoms that they need not be referred to here. Pemphigus neonatorum being also a very rare disease and seldom seen

in private practice should be carefully studied whenever a differential diagnosis is to be made.

Prognosis: The mortality is very high—about 50 per cent. Of Ritter's 297 cases, 145 died, 150 recovered and 2 were still under observation at time of report, making a mortality of 48.8 per cent.

Treatment: The specific cause being unknown, the treatment is largely symptomatic; but the treatment is clearly indicated. Nourishment is of first importance. The body heat should be maintained. Vaseline or some of the oils with 1 per cent boric acid or icthyol is soothing. This should be applied freely and the body wrapped in absorbent coton. Watery lotions are contra-indicated. Baths should be forbidden, as the water irritates the inflamed skin.

Union Trust Building.

HYDROTHERAPEUTICS.

BY J. B. COOK, M.D., LOS ANGELES.

Hydrotherapeutics is the use of water in the treatment of disease. It is used either as a pyretic or antipyretic. Its use as a pyretic is indicated in shock principally. In shock, whether from accidents or surgical operations there is a condition of vasa-motor paralysis which allows of a too rapid cooling of the body. In cases of this kind the hot bath will probably do more toward saving life than any other one agency. The patient should be put in a bath at 104° in a hot room. If conscious, the heat of the bath should be increased as rapidly as the patient will allow until his limit of endurance is reached, and if unconscious it should be increased to a temperature of 108°. The duration should be not less than half an hour. We are not advising the bath to the exclusion of dry heat and digitalis, atropia, etc., but merely wish to show that there is a decided place for hydrotherapeutics in the treatment of shock.

The study of the uses of cold water

may be divided into three divisions. I. Local use. 2. General use as a tonic. 3. General use in fevers.

1. When used locally, cold applications act as powerful depressants if used persistently. If used intermittently they act as stimulants, as the reaction following their application exceeds the original impression made. In internal inflammations as in pneumonia, pleurisy and peritonitis, the cold compresses are to be continued until results are noticed. Viz. reduction of fever and pain. If they become very distasteful remove and apply very hot applications, especially in peritonitis. It has been noticed that the application which gave the most comfort seemed to give the most benefit. Either application must be watched with great care as actual death of tissue may result from an over-zealous treatment.

2. The use of cold as a tonic is exemplified by the cold bath. Many people experience a wonderful exhilaration from the reaction of a cold shower bath or a cold rub down in the morning just after arising. So also does the sea bath effect people who are strong. Incalculable harm has been done by cold bathing where the water is too cold or the bath too prolonged, the bather being left in a state of serious exhaustion, partially from the abstraction of heat, and in sea bathing by the extreme fatigue from the buffeting of the waves. I have seen children who came back from the beach after a stay of a month or two who required careful attention to bring back even a tolerable condition of health. I have likewise seen the same effects resulting from too frequent and prolonged bathing at hot springs.

3. General use of the cold bath in fevers and other diseases with high temperature will be prefaced by a few remarks on the physiological action. There are three propositions laid down by one author, which I learned at college, and which seem to me to be apropos at this time. I. External heat applied to the body of the normal animal, so as to elevate the temperature, produces derangement of the nerve functions, of circulation, respiration, etc., precisely similar to those seen in natural fever. The intensity of the disturbance being directly proportionate to the rise in temperature. 2. Heat applied locally to the brain or to the heart produces in the functions of the organ those disturbances which are familiar phenomena of fever, the intensity of the disturbance being directly proportionate to the excess of heat in the organ. 3. withdrawal of the heat is followed by a relief of the nervous and circultory disturbances.

The experiments of H. C. Wood along this line are very interesting. By shutting cats, dogs and rabbits up in boxes and allowing them to be superheated, either by the sun's rays or by artificial means, he noticed the pulse becoming rapid, the respiration more

and more hurried, the body movements restless and uneasy and a general appearance of distress. As the temperature increased the nervous disturbances become more and more apparent; and stupor, coma, partial paralysis, convulsions and finally death by arrest of respiration occurs. The bodily temperature at which death occurred was for the rabbit III° to II41/2° and for the dog III°. Experiments upon man have shown similar phenomena, but owing to his great ability to cool himself, he stands greater extremes of external heat than other animals; but when his body really gets warmed to the proper degree death ensues just as in the other animals mentioned. Wood also experimented on the effects of the local application of heat to the brain and heart and found that when the brain became heated to the proper degree that all the nervous symptoms of the animal in the box, even death itself, were duplicated; and that if the heart were heated to a like temperature that the circulatory disturbances were reproduced. All this notwithstanding that the balance of the body might be of a lower temperature. He also tried resuscitation of the animals after profound unconciousness had occurred and found that merely cooling them rapidly restored them in a few minutes to a normal condition. He cites the case of a man with sunstroke, who was absolutely comatose, a temperature of about 110° and pulse 160 or 170 with irregular, jerking and slow respirations and every indication of speedy death: This man was put in a bath at 60° and in 11/2 minutes consciousness was partially restored and in another minute and a half he was trying to get out of the tub. These experiments appear to show that the phenomena attending fever are caused by the heat itself, and can be produced artificially in any degree. Before proceeding to discuss the application of the bath to particular diseases it will be well to study for a few moments its action. It has been found by one man that a cold sitz bath will elevate the axillary temperature in a normal man, and that in fever patients there is no fall in temperature unless the bath is continued more than 20 ninutes. Kernig discovered many years ago that a healthy man in a bath of 28 to 30 C produced twice as much heat as normal. In baths of 24 C three times as much and in baths of 20 C four times as much. Liebermeister confirmed these findings a few years later and found that they applied as well to fever patients unless the baths were prolonged. He also, with other investigators, found that after removal of the fever patient or the healthy man from the bath, the temperature fell to a figure lower than when entering the bath and remained low for a longer or shorter period. Currie of London was the pioneer who first prominently agitated the use of the cold bath in fevers. That was 100 yrs. ago and in modern times Brandt of Stettin did a resurrection act on it and he and his admirers have firmly placed it on a scientific plane and it now occupies the place of honor in the treatment of a number of diseases.

The extent to which water in some form is advised in the treatment of the various diseases is shown in the latest edition of Anders Practice of Medicine. I looked that work over pretty thorbughly and found that out of the hunlreds of diseases treated of, in about ifty, hydrotherapeutics in some form vas advocated. To be sure, in the great majority of the fifty diseases nentioned there was only a couple of ines or so, saying that the temperature fould be controlled by cool sponging or by the use of ice bags, or that hydroherapeutics was the best means at our lommand with which to control the ervous symptoms. But occasionally ve find one of the most important disases where hydrotherapeutics is recomnended as the great life saver. The first one of this class is typhoid fever. He says that there is a general agreement among Medical authors that the best mode of treatment of this disease is the cold bath. That the benefits which accrue to the patient are so great and varied that it is the duty of every physician to be able and willing to employ it. The beneficial influences of the bath are as follows: 1. They absorb the body-heat directly, thus reducing the high temperature and overcoming the ill effects of the high fever, this action becoming more marked after a day or two of the treatment. 2. They improve the nervous symptoms, diminishing the mental dullness, delirium, stupor, muscular tremors and twitchings, and inducing sleep. 3. They strengthen the heart, thus obviating the danger of sudden circulatory collapse and the consequences of increasing cardiac weakness, such as hypostatic congestion of the lungs and venous thrombosis. 4. They stimulate the respirations whereby the inspirations are deepened and the tendency to pulmonary complications greatly lessened, especially bronchitis and lobular pneumonia. 5. The renal function is invigorated, and as a result the typhotoxins are eliminated to a greater extent. 6. On account of the cleanliness of the skin which they ensure, bedsores rarely occur. 7. The stay in the hospital or sick-room may be shortened, but not the stay in bed except the slightest cases.

The mortality in cases treated by this method varies from 0.5% in Europe with no deaths in those cases which come under treatment by the 5th day to 7.8% in 102 cases treated by Anders in this country.

There are two principal methods of giving the bath. The cold bath of Brandt is given as follows: The patient is lifted in a sheet by four attendants and placed in a bath at 70° and allowed to remain fifteen minutes. All the time he is in the bath his back and limbs are

rubbed vigorously to stimulate the circulation and if nervous symptoms are prominent water at 70° poured from a height of 6 inches upon his head and neck. If he shows signs of collapse while in the bath he can be given an ounce of whiskey. Upon removal from the bath he is placed on a rubber sheet covered by a blanket and dried and the wet bed-clothes removed and he is covered up warmly. If necessary hot bottles are placed at his feet and active stimulation resorted to if reaction is delayed. Mild cases or children can be managed by two attendants but none should be allowed to step from the bed to the tub. In ordinary cases the baths should be given every 6 to 3 hours as needed. The indication for a bath being a temperature of 102.2 in the rectum. In the more severe cases they may be given as often as every 3 or 4 hours, but not oftener than every 3 hours. The temperature usually falls 2 or 3 degrees, but may fall one degree or less in the severe cases. In the latter case the bath should be prolonged to 20 minutes or the temperature of the water

be further reduced. The baths should be given irrespective of the temperature of 102.2 until the evening temperature remains below 101° is Anders opinion.

In the graduated bath of Zreinssen the patient is put in a bath at 85°. After he becomes accustomed to this bath he is put into a bath at 80° and reduced to 75° or 70° and it is seldom necessary to go below that figure. According to Anders the following are the contraindications to the use of the bath.

- I. Intestinal hemorrhage should cause a discontinuance of the bath for 4 days.
- 2. Peritonitis, which always causes one to suspect perforation, causes one to discontinue the bath and to institute absolute rest.
- 3. Extreme cardiac weakness in the advanced cases or in the aged may result in sudden death while bathing.
- 4. Those cases which come under observation in the 3rd week of the disease should not be subjected to the bath.

H. W. Hellman Bldg.

VENTRAL HERNIA.

BY H. G. MARXMILLER, M.D., LOS ANGELES, CAL.

In these days of frequent operations in case where drainage is necessary and also following in some cases faulty closure as well as traumatisms of other kinds such as gun shot wounds, stab wounds and blows upon the abdomen, we encounter sufficiently often ventral hernia to make it worth while to consider the subject from a surgical standpoint. A portion of the abdominal contents at any part of the abdominal wall other than the umbilical, inguinal or femoral region may be correctly termed a ventral hernia, thus protrusion must consist of a neck and be lined with peritoneum.

A traumatic ventral hernia is a hernia

following some form of injury to the abdominal wall, in the form of an abscess or blow, but more frequently it comes from some incisive wound which has divided the muscular fibre-They are as varied in size and shape as the patients are numerous, for when the protrusion once starts it increases rapidly unless checked by suitable and prompt treatment. The irregular shape of these tumors are probably due to fibrous bands that retard a portion of the tumor and thus cause the irregular shape. The contents of these hernia are usually omentum and intestine, sometimes bladder, colon, etc. These hernia in their earliest stage are usually

easily reducible, but if allowed to go untreated it very shortly becomes partially so; at first they are not very painful, but as they increase in size they become more painful and also are accompanied by a sense of weakness. Strangulation of these hernia fortunately rarely occurs, but gradual loss of peristaltic action in the bowel terminate in intestinal obstruction is more likely to occur.

Treatment divides itself into mechanical and surgical, and it is of the surgical I wish to speak. Most of these hernia can perhaps be held, if reducible, by abdominal trusses and belts, and this line of treatment should of course be pursued in the cases where an operation is counter-indicated.

The counter-indication to operation in ventral hernia can be summed up in a few words. We have probably as the most common counter-indication are excessively fat people of middle life, especially so is it bad if the accumulation of fat is due to beer drinking, leading to degeneration of other tissues as well as the abdominal wall.

"Secondly, Ascites in no cases except as a life-saving measure should an attempt be made to cure hernia by operation in any patient who has an excess of fluid in the abdominal cavity."—

DeGarmo.

Third.—Enormous hernia with intestinal adhesions are especially dangerous for operation owing perhaps to the amount of handling of the bowel and also of the intra-abdominal pressure to which it is subjected after the reduction in large quantities.

Surgical treatment resolves itself in: First, in thorough preparation of these patients as regards to removal of all of the contents of the bowels, especial preparation of abdominal wall, and then

an operator who is not controlled by hard and fast rules in regard to any special form of operation, but able to do an operation, that will do more than simply reduce the contents of the sac and oppose the edges of the vent. The operation perhaps that has given the best results in these cases is that of imbrication, and the imbrication should be done according to the size and position of the hernia. If one is treating an umbilical hernia, I believe the operation credited to Mayo with the transversed incision and transverse imbrication from above downward is the operation of choice; if we have one of the multiple median hernia to deal with you probably will obtain better results from the verticle imbrication of Blake and if you have a traumatic hernia in the inguinal region or above that region, laterally, as I had several years ago as the result of an explosion of a canon tearing away considerable tissue in the left inguinal region resulting in an oblique rent of some size, you will overlap your walls, neither transversely nor vertically, but in the direction of least resistance, obliquely as in the above case. One must also be sure to place several good sutures as fixation sutures. and I have preference for the kangaroo tendon and mattress sutures, overlaping as much as an inch if possible. You can separate the porietal peritoneum if you will and place one flap in the pocket thus formed, or simply overlap as you find the walls. Of course it is necessary to free all adhesions, and be sure you place your sutures carefully. The after treatment is the same as after other section, and patients can go about at the end of two weeks without any support whatever.

412 Grant Bldg.



Established in 1886 by
WALTER LINDLEY, M.D., LL.D., Editor and Publisher.
This journal endeavors to mirror the progress of the profession of California,
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1414 South Hope Street, Los Angeles, California.

EDITORIAL

SCOPOLAMIN-DANGERS OF MORPHIN ANESTHESIA.

Since Schneiderlin and Korff revived anesthesia by Scopolamin-Morphin in 1903, many surgeons, influenced by a desire for an easy method of producing unconsciousness, have followed the example of Tuffier, using one millegram of scopolamin with one centigram of morphin; the latter being doubled if necessary. However so many fatalities occurred (I in 222, Wood) or so much psychic disturbance followed, especially in gynecologic and obstetric practice (Steffen) that the dose of scopolamin was by some limited to one-half millegram, or at most one one-hundredth of a grain and morphin to one-third of a grain. Even then danger was not averted and enterprising manufacturing pharmacists added cactin and claim

freedom from dangerous depression, yet cactin, or cactina, appear to have little if any pharmacological activity and are of doubtful value.

Manufacturers, both chemical and pharmaceutical, have substituted hyoscin, which consists of levo-rotary scopolamin, with a dextro-rotary isomeratroscin, together constituting racemic hyoscin, bearing the same relation to scopolamin as atropin does to hyoscyamin, and possessing similar differences in physiological activities. We well know that levo-rotary hyoscyamin alone acts upon the vagal endings in the salivary glands, heart and pupils, having nearly twice the power upon them of atropin, has less stimulant effect upon the spinal cord, and greatly less effect upon motor endings. Similar differences are to be observed in the action of scopolamin and hyoscin, the latter being safer in the same dose and fully as effectual an anesthetic as scopolamin. It has less effect upon the activity of glands and is slightly less depressing upon the vasomotor center and endings.

The stimulation produced is of brief duration, and as a matter of fact may be ignored, for although the statement is made by advocates of their use that "blood pressure rises" it is very slight and of brief duration; the effects of both scopolamin and hyoscin being depressing almost from the beginning, not only upon the psychic areas, but upon the motor areas and upon the centers and terminals controlling the circulation, both in the heart and vessels and sooner or later upon the respiratory They do not compare with center. atropin in preventing reflex vagal inhibition, and although hyoscin exhibits slight power in this direction, it soon manifests its paralyzing effect upon the vagal, vasomotor and respiratory centers; the heart becomes rapid, blood pressure falls, due to paralysis of the smooth muscle in the arterial walls. while respiration is slowed from the beginning.

How closely these results resemble the ill effects of chloroform. Yet chloroform is advised if the anesthesia is not sufficiently profound. If we add to this the effect of a full dose of morphin upon the psychic and motor areas, upon the vasomotor and respiratory centers—IS IT TO WONDER THAT DEATH FREQUENTLY FOLLOWS?

These drugs are to be avoided in the very young or the very old, in all who

are enfeebled from any cause, and when the myocardium is weakened by toxemias their paralyzing influence would be manifestly dangerous. They might be used in the strong and middle-aged or in those having a strong heart with high blood pressure, but here even, chloroform is safer and the dosage is under our control and in nearly all cases ether narcosis is safer and to be preferred.

T. G. D.

CATARACTS: THEIR OPERA-TIVE TREATMENT.

Since the time opacity of the crystalline lens was known to be one of the frequent causes of blindness, mankind has been looking for some means, other than operative, to cure the condition. Taking advantage of the innate dread of patients in general to operative procedures, the quack has filled his coffers with the money of the fearful by promising to cure cataracts without operation; which promise he invariably fails to make good. It is a well established fact that cataracts in the early stage have been known from time to time to disappear spontaneously, though this of course is exceedingly uncommon. Some ten or fifteen years ago, a Doctor Kalish published in the Medical Record, a method of curing incipient cataracts, consisting mainly of a form of massage carried out daily for a number of weeks; but the success following the publication of his article never gained him especial renown. Some eight or ten years ago, a physician in New York -Dr. James E. Kelley-succeeded in causing the disappearance of a number

of incipient cataracts. His method is stated to consist in administering-"water, at least three quarts a day, and has them go through exercises."† The number of these cases evidently was not large, as the method has never gained any especial place in ophthalmic literature. These are only a few of the many attempts at cataract medication.

In 1901, Prof. Badal of Bordeaux published in the Clinique Ophthalmologique de Bordeaux, some results from the use of potassium iodide in incipient cataracts which attracted considerable attention; and the method was taken up by Defur, Eitevant, Dramsart, Picquénard, Boisseuil Lefon and others, and now it is stated that a number of French text books on ophthalmology include the treatment of Badal in their therapeutics of incipient cataract. In 1904 Verderau performed numerous experiments upon various animals. causing subcapsular cataracts by traumatism, and then causing their disappearance by the used iodide of potassium. In the same year, V. Pflugk of Dresden,‡ took up the treatment of this class of cases, first with eve drops and baths-the original Badal method-but soon began the subconjunctival injection. From various experiments, he decided that about as much potassium salt was taken up by the baths, as by the injections, but his clinical observations were to the effect that much more rapid disappearance of the cataract was brought about by the injections than by the baths. Although Verderau used a 5% iodide solution, and later a 21/2% solution, V. Pflugk found a 1% solution

of potassium iodide with 2% sodium chloride, much better adapted, causing much less reaction. As regards the anesthetic, he used a 3% solution of cocain hydrochloride on a cotton tampon over the site of the proposed injection. Of late he states that he has found an oily solution of acoin to assist materially in preventing pain. Of the 1% potassium iodide solution, he injects from one half to a whole hypodermic syringeful beneath the scleral conjunctiva twice or thrice weekly, and that the patients do not complain greatly of pain. The author states also that this treatment is only useful in uncomplicated cataracts of the subcapsular variety, and has not succeeded in the capsular, or nuclear varieties. In a table presented in the journal referred to, V. Pflugk shows the results of treatment in 239 cases by what he calls the Badal treatment; in this the percentage of "Greatly improved" varies from 10% in the first series of Badal's own cases, to 53% of those of V. Pflugk; those "Moderately improved" from 6% (Badal) to 49% (Verderau); "Remaining stationary" 6% (Verderau) to 88% (Badal). Of the 239 cases treated, but 22% were reported as progressing. It should be stated that many of Badal's cases were among those earliest treated when the drops and eye baths were used most exclusively, in which cases the results were less favorable, those later were much better-he reports two series-in which he used both the injections and the eye baths. In reviewing the article of V. Pflugk above referred to, one is struck

[†]Dr. W. H. Bates' discussion on treatment of incipient cataract, meeting of A. M. A. 1900. †Medizinische Klinik, Berlin, February 1908.

with the lack of specific statements as to the quantity of vision possessed by the cases reported. The results are tabulated as greatly improved, improved, stationary and worse. However there is no statement by any of the reporters as to the exact vision of any of the patients, before the treatment, or after its discontinuance, and this lack of specific statement is the only

criticism we would offer. The author states that it requires about three months treatment to obtain the best results; he also expresses himself with great enthusiasm in reference to this treatment, and in cases coming to him in the incipient stage, he does not hesitate to assure them that they will not get worse, but in all probability will greatly improve.

W. H. D.

EDITORIAL NOTES

Dr. Solon Briggs of Pasadena is very ill in the East.

Dr. A. B. Lull of Battle Creek, Mich., has located in Orange, Cal.

Dr. John E. Brooke (Eclectic) died in Whittier, May 19, aged 50.

Dr. W. L. Holt, formerly of Boston, Mass., has located in Santa Barbara.

Dr. J. A. Roberts, formerly of Tonopah, is now located in Rawhide, Nev.

Dr. B. F. Copp of Albuquerque has been taking his vacation in California.

Dr. H. W. Fenner of Tucson was recently called professionally to Los Angeles.

Dr. C. C. Gordon was recently appointed health officer of Las Vegas, N. M.

Dr. J. R. Cunningham of Tonopah, Nev., has been spending a few days in California.

Dr. G. N. Fleming of Raton, N. M., has been having a pleasant vacation in California.

Dr. C. C. Browning of the Pottenger Sanatorium is spending a few months in Europe.

Dr. T. P. Martin of Taos, N. M., was recently called professionally to the city of Santa Fe.

Dr. W. Seymour Davis, formerly of Compton, has located in Fullerton, Orange county, Cal.

Dr. Philip H. Weber, formerly of Redding, has located in Winthrop, Shasta County, Cal.

Dr. Allen Harris of 309 Colorado Building, Denver, has been paying a visit to Los Angeles.

Dr. Irving Reed Bancroft of Los Angeles and Miss Alice Elizabeth Jobson were married May 20.

Dr. Warren N. Horton, Los Angeles City Bacteriologist, has been spending a few weeks in the East.

Dr. T. W. Stone, formerly of Redondo, has located at 415½ South Spring street, Los Angeles.

Dr. and Mrs. Frank Wood entertained the Long Beach Medical Society on the evening of May 26.

Dr. George M. Fulton has located in Carlsbad, N. M. He has great faith in the springs of that vicinity.

Dr. E. T. Dillon of Los Angeles recently addressed the Long Beach Medical Society on "Fractures."

Dr. H. M. Robertson of Arlington, Riverside County, has been taking postgraduate surgical work in Chicago. Dr. Edward W. Trueworthy of Lowell, Mass., has been visiting his cousin, Dr. J. W. Trueworthy, in Los Angeles.

Dr. Isaac W. Brewer, U. S. A., has been transferred from Fort Huachaca, Arizona, to Fort Warren, Boston, Mass.

The Southern California State Hospital for the Insane at Patton has been going through an epidemic of diphtheria.

Dr. James T. Fisher of Los Angeles has been visiting in Boston, Mass. The doctor also attended the American Medical.

Dr. J. A. Mack of San Bernardino has been disabled for some time with a broken leg, but is again able to be at his office.

Dr. H. R. Martin on the evening of May II entertained the Riverside County Medical Society with a dinner at the Country Club.

Dr. H. L. McNew is president of an organization that has just completed the Physicians' and Surgeons' Hospital at Rawhide, Nev.

Dr. Albert Moore of the City Board of Health is making an earnest effort to have the Los Angeles Orphans' Home moved to the country.

Dr. C. O. Waterman entertained the Long Beach Medical Society at supper on April 28. It is unnecessary to say there was a full attendance.

Dr. Ferguson, the Superintendent of the Arizona Hospital for the Insane at Phoenix, is about to erect a \$25,000 annex to that institution.

Dr. Albert Basset Smith, aged 73 years, died April 28 at his home at Norwalk, Cal. He was a graduate of the Medical College of Ohio.

Dr. F. H. Huning, who graduated from Bellevue Medical College, class of 1896, was recently reappointed County Physician of Ventura County, Cal.

Dr. Robert Walter Brown of Santa Maria, Cal.— a native of England—has made application for first papers for naturalization as an American citizen.

Dr. Herbert Nadeau of Los Angeles was recently operated upon in Baltimore for enlarged prostate and at last accounts was making an excellent recovery.

Dr. C. H. Knox, recently located in Colton, Cal. The Wise County Medical Association (Texas) adopted very eulogistic resolutions on Dr. Knox's departure.

Thomas H. Storey, who for three years practiced medicine and surgery without a license, was fined \$500 and sentenced to sixty days in the City Jail by a Los Angeles judge.

Dr. and Mrs. Milbank Johnson recently entertained the Phi Rho Sigma fraternity at dinner in honor of Dr. W. W. Beckett, the new president of the California State Medical Society.

Dr. Cullen Andrews Battle, president of Battle & Co. Chemists, Corporation, St. Louis, died at the Hotel Jefferson in that city March 22d. He was 60 years old and had been in successful business in St. Louis for 33 years.

The Journal of the Arkansas Medical Society contains an interesting account of a Pacific Coast trip by Dr. C. C. Stephenson of Little Rock. Dr. Stephenson makes some pleasant references to Los Angeles physicians.

Dr. George T. Greenleaf died at Holtville, Imperial County, Cal., Tuesday, April 28. Before coming to California Dr. Greenleaf was on the staff of the Cook County Hospital, Chicago. He was 49 years old.

Members of the Imperial County Medical Association were on May 19 the guests of Dr. and Mrs. McCombs at the Central Hospital, El Centro. Dr. G. G. Moseley of Redlands was elected an honorary member.

Dr. Wm. L. Shawk, physician to the Indian School at Phoenix, Ariz., on

Saturday, May 9, took a dangerous quantity of atropine by mistake. For eight hours it looked as though he would die, but he finally recovered.

Switzerland has crematories in Basle, Geneva, St. Gall and Zurich, and additional ones are about being built in Lucerne, Chaux de Fonds, Aaran, Neuchatel and Berne. The sentiment in favor of cremation is rapidly growing among the Swiss.

Pediatrics in reviewing Dr. Pottenger's work says: "Among the many books that have recently appeared treating on the subject of tuberculosis, this volume easily ranks first. . . . This work is one that no intelligent physician can afford not to read."

The New York Post-Graduate Medical School and Hospital have recently established the chair of Modern Phthisiotherapy and elected Dr. S. Adolphus Knoff as Professor. We congratulate the party of the first part as well as the party of the second part.

The following have recently been elected members of the Los Angeles County Medical Association: Dr. J. Pollin French, Dr. P. O. Sunden, Dr. Isaac A. McCarty, Dr. S. Y. Van Meter, Dr. Henry H. Lissner (by transfer from an Francisco County Society.)

Dr. Clifford A. Wright, interne and pharmacist at the Los Angeles County Hospital, has passed successfully the evil service examination and been appointed assistant police surgeon. Dr. Wright graduated from the College of Medicine of the University of Southern California, class 1907.

There are eighteen members of the Las Vegas, N. M., Medical Society and the following officers: President, Dr. W. R. Tipton; Vice-President, Dr. H. W. Goelitz; Treasurer, Dr. H. J. Mueller; Secretary, Dr. H. W. Heymann; Censors, Dr. C. H. Bradley, Chairman, Dr. E. B. Shaw and Dr. H. M. Smith.

Mr. J. A. Graves, the Los Angeles banker, has presented the College of Medicine of the University of Southern California with the private laboratory of his son, the late Selwyn E. Graves. Mr. Graves has also given to the college cash and securities to put this laboratory in the best shape possible to be of value to the students.

Dr. Norman Bridge of Los Angeles is Secretary and Treasurer of the Mexican Petroleum Company that is now paying dividends to the amount of \$1,000,000 per year. The doctor is a large stockholder in this company. Dr. Bridge is also Secretary and Treasurer of the American Petroleum Company that has a capital of \$10,000,000.

Dr. Colin G. Strong, an aged ex-army surgeon and former resident of San Francisco, died in Los Angeles May 7. Dr. Strong was born in Edinburg in 1827, while his father was serving as American Consul-General there. At the beginning of the Civil War he entered the army as a surgeon and served three years. The body was cremated.

Dr. Edward C. Register announces that the Charlotte *Medical Journal* and the Carolina *Medical Journal* have been consolidated. A stock company has been created which will conduct one *Journal* in the future. The *Journal* of the new corporation will be known as the Charlotte *Medical Journal*, and will retain the same architectural features, business and editorial management as the present Charlotte *Medical Journal*.

Drs. Rea Smith, E. C. Moore and Raymond G. Taylor have entered into a contract with the city of Los Angeles to care for the employees on the great Owens River Aqueduct system. This involves serious responsibilities—financial and professional—and the city is to be congratulated in the character and ability of the men who have assumed them.

The Los Angeles Post-Graduate School of the College of Medicine of the University of Southern California will have two summer courses of six weeks each. The first course begins July I, the second course begins August 15. Physicians interested should address Dr. W. T. McArthur, Secretary, Security Building, corner of Fifth and Spring streets.

Dr. Rupert Blue, past assistant surgeon U. S. A., is waging a relentless war against the rat. He says: Sewers should be built of reinforced concrete or some other material equally impervious to rat. The sick rat cannot keep the fleas from its body like the well one; the fleas congregate on the infected one, gorge themselves of its poisoned blood and then leave for the next warm thing—it may be another rat or it may be you."

The Arizona Medical Association held its annual meeting in Tucson the last week in April. The meeting was in all respects successful. The following officers were elected for the ensuing year: A. W. Olcott, President, Tucson; J. W. Foss, First Vice-President, Phoenix; C. E. Yount, Second Vice-President, Prescott; A. L. Gustetter, Third Vice-President, Nogales; J. W. Flynn, Secretary, Prescott; E. B. Ketcherside, Treasurer, Yuma; J. E. Bacon, Councilor, Tombstone.

Dr. D. C. Barber, Medical Superintendent of the Los Angeles County Hospital, recently entertained a large number of prominent physicians. The doctor read a paper on amoebic dysentery showing favorable results from washing on the intestines through an incision in the appendix. Dr. Joseph Kurtz had a paper on "Tuberculosis of the Joints," Dr. Donald Frick on "Arthrites Deformaus," and Dr. C. L. Allenon "Paralysis Agitans." The guests were then invited to a delightful supper.

Prof. August Martin, the celebrated gynecologist of Berlin, spent several

days in Los Angeles. He made a thorough inspection of the California Hospital from kitchen to operating-room. While in Southern California was entertained by Drs. Norman Bridge, Granville MacGowan, W. W. Beckett and others. On June 10 the physicians of New York City gave Prof. Martin a brilliant farewell dinner at the Hotel Astor. Dr. Wm. M. Polk presided. The tickets were \$7 per plate.

President Roosevelt has accepted the presidency of the International Congress on Tuberculosis to be held in the city of Washington, September 21, 1908, to October 12, 1908, inclusive. In his letter of acceptance he says: "The International Congress on Tuberculosis is in the interest of universal peace. By joining in such a warfare against a common foe the peoples of the world are brought closer together and made to better realize the brotherhood of man; for a united interest against a common foe fosters universal friendship."

The Orange County Medical Association held their annual banquet in Santa Ana Tuesday evening, May 5. The following officers were elected for the ensuing year: President, Dr. John Wehrly; Vice-President, Dr. J. L. Beebe Secretary, Dr. J. M. Burlew; Treasurer Dr. John L. Dryer; Librarian, Dr. H S. Gordon.

Dr. F. M. Bruner delivered the annual address, taking for his subjec "Our Medical Society."

A sumptuous banquet followed, Dr John Wehrly, the new President, acting as toastmaster. Dr. Freeman, of Fullerton, responded to "The Doctor as a Financier;" Dr. Ball, "The Doctor in Politics;" Dr. Wall, "Reminiscences of a Country Doctor;" Dr. Dryer, "The Doctor as a Diplomat;" Dr. Gordon, "The Existing Relation Between the Doctor and the Public."

The following were present. Dr. and Mrs. J. L. Dryer, Dr. and Miss Pearl Wall, Dr. and Miss Rosa Boyd, Dr. and Mrs. G. A. Dodson, Dr. and Mrs. F. M. Bruner, Dr. and Mrs. C. D. Ball, Dr. and Mrs. J. I. Clark, Dr. H. S. Gordon, Dr. J. M. Burlew, Dr. and Mrs. John Wehrly, Santa Ana; Dr. and Mrs. Freeman, Fullerton; Dr. J. L. Beebe and Miss Papst, Anaheim; Dr. and Mrs. Violet, Garden Grove; Dr. Ida B. Parker and Miss Scarritt, Orange.

Capt. Paul C. Hutton, assistant surgeon U. S. A., reports that 48 per cent. of the adult Indians of Alaska are suffering from tuberculosis, while practically all of the children are suffering from some disease or other. "Conditions among the Alaskan Indians," said Capt. Hutton, "are the worst I have ever seen. They are indescribable. The natives have no conception of cleanliness, and from the habits of consumptives in the schools and missions many children are tubercu'ar from birth. The only salvation lies in sending instructors and medical men north and compelling the Indians to observe sanitation."

Dr. Nelson D. Brayton, one of the government physicians at the Ancon Hospital, Panama, has been visiting his father, Dr. A. W. Bragton, editor of the Indiana Medical Journal. In the course of a talk before the Indianapolis Medical Society (Central States Medical Monthly), he said that malarial fever was the prevailing disease and the types were the tertian and the estivo-autumnal. Quinine is given in large quantities; 20 grains every two hours is often necessary at the onset; if the fever continue after its use for five days the case is generally considered one of typhoid fever. Many cases are brought to the hospital in a comatose condition and are treated hypodermically; the solution for sub-cutaneous use contains urethane and 20 grains of quinine for the initial dose. If the patient does not improve in a short time and remains drowsy a like dose is again administered.

The Los Angeles Health Department is strictly enforcing the law of California that requires that every physician, nurse, or other person having the care of or knowing of any person affected with the following named diseases, shall report the same to the Health Officer: Bubonic plague, Asiatic cholera, typhus glanders, anthrax, smallpox, membranous croup, diphtheria, scarlet fever, yellow fever, leprosy, measles, tuberculosis, typhoid fever chickenpox, cerebro-spinal-meningitis, trachoma, uncinariasis (hookworm), whooping cough, mumps, dengue, dysentery, erysipelas, pneumonia, tetanus, and Manila, Cuban, Philippine, adobe or kangaroo itch. Of the above stated diseases the following are quarantinable: Bubonic plague, Asiatic cholera, typhus fever, vellow fever, smallpox, diphtheria, membranous croup, scarlet fever, glanders, anthrax, leprosy and measles.

The following physicians were granted licenses to practice medicine in New Mexico at the recent meeting of the Territorial Medical Board: John F. Starley, Fort Sumner; Guy L. McKinley, Salano; Thomas J. Forham, Raton; Ortiz F. Adams, Fierro; George Fulton, Carlsbad; Ulysses P. White, Artesia; A. J. O'Leary, Leopold; Byron Ferguson, Chama; John W. Coon, Watrous; Clarence P. Cook, Watrous; D. D. Jay, Raton; V. S. Cheney, Albuquerque; Byrd S. Powell, Nara Visa; M. L. Allen, Santa Fe; Abe L. Hazen, Estancia; Frances S. Conoway, Farmington; John Colbert, Albuquerque; Willard Smith, Santa Fe; Charles F. Diefendorf, Logan; B. J. Plunkett, Carthage; C. L. Fries, Logan; Lloyd B. Boster, Clayton; Horace P. Cowley, Santa Fe; Sanford E. Wells, St. Vrain; Guide Barringer, Oscuro; E. D. McKinley, Alamogordo; L. D. McClure, Nara Visa; Edmund G. Sugg, Carrizozo; Marvin P. Sheen, Artesia; Robert Smart, Albuquerque; F. R. de la Vergne, Albuquerque.

The graduating exercises of the class of 1908 of the Los Angeles County Hospital Training School for Nurses took place on the evening of June 10, at Cumnock Hall. There are twenty-four members of the class, coming from various States, England and Canada. They are: B. Mordaunt Wilson, England; C. Vernon Smith, Kettering, England; Elizabeth Janet Maples, Berkeley; Elsie C. Stevens, Los Angeles; Edna Clark Wetterman, Berkeley; Gertrude Dellas Barry, Barrie, Canada; Lon H. Wentworth, Lynn, Mass.; Margaret Kathryn Arth, Cincinnati, O.; Anna Beltram Scott, Canada; Elizabeth L. Cunningham, Boston; Grace Lillian Shaw, Santa Clara; Rachel Catherine Fisher, Lawrence, Kan.; Agnes I. Morrison, Clarksburg, W. Va.; Nellie M. Peterson, Round Rock, Tex.; Jeannette E. Morton, Santa Barbara; Louise E. Herbster, St. Louis; Gwendolyn Virginia Weinert, Tucson; Clotilde Barnett, San Francisco; Martha Milhous, Whittier; Bessie F. Moore, Atlanta; Blanche V. Lebo, Chicago; Martha J. Wellman, Ozawkie, Kan.; M. Ruth Fisher, Lawrence, Kan.; Effie Merritt Campbell. San Francisco.

The School for Nurses of the California Hospital held their tenth annual graduating exercises at Gamut Club Hall Thursday evening, May 28. Prof. J. H. Francis delivered the address; Dr. W. T. McArthur addressed the nurses on behalf of the faculty, and Dr. F. T. Bicknell, the President, conferred the There were many flowers, diplomas. and the intelligence and attractive appearance of the graduating class caused many exclamations of admiration. After the formal exercises the class held a reception and the evening closed with a dance. The class is composed of the following: Mary G. Thomas, Roscoe, Ill.; Mary Martha Marcks, Salinas, Cal.; Bertha Katherine Petersen, Chicago; Mary A. Rinehart, Modesto, Cal.; Della Ensign, Kansas City, Mo.; Sara

Van Dyke, Los Angeles; Emma Bertha Cooper, Birmingham, Ala.; Marie Louise Webster, Santa Barbara; Marian Helen Roberts, Los Angeles; Damaris Annette Beeman, Salt Lake City; Alma M. Karlsson, Alfa, Wyo.; Daisie E. Newkirk, Harbor Springs, Mich.; Wilhelmine Lickert, San Diego; Emma Engle, Colon, Mich.

Dr. Samuel Merritt Hitt died in Los Angeles Sunday, May 10, 1908. He was born in Mt. Morris, Ill., in 1867, and graduated from the College of Medicine of the University of Southern California, class of 1890. Dr. Hitt had an extensive and rapidly growing practice in Los Angeles, until about two years ago, when ill health overtook him. The Rev. Warren Day, pastor of the First Congregational Church, officiated at the funeral. In speaking of Dr. Hitt's career the speaker paid particular tribute to the unselfishness of the man. "Many times," said Dr. Day, "our friend was called to the bedside of a patient from whom he could expect nothing in the way of a fee. That made no difference with Dr. Hitt. To any one who needed he gave his best. Through darkness and light he was always the same, a lovable man, dear to his friends and dearer to those who knew him only through his professional career. Many lives he has saved, not only because of his medical skill, but because of the intense devotion of the man to any patient." Dr. Hitt had many close, personal friends in the medical profession and Drs. J. C. Ferbert and A. W. Edelman were pall-bearers.

We are in receipt of "Instructive District Nursing," a report of ten years' Settlement Work in Los Angeles. The statistical report on the last year's work is interesting, showing the great diversity diseases and conditions encountered. The mutual benefit derived by the medical students of the College of Medicine, U. S. C., and the Settlement Workers in the ten years that they have co-

operated is shown throughout the report. If prominence is given to the College of Medicine, U. S. C., over other medical institutions in this city, it is easily understood when we consider the active part this college has taken for more than twenty years in this work. Credit is due the able and untiring chairman of the College Settlement, Mrs. Maud Foster Weston, and her assistants for the accomplishments of the past ten

years. In the near future this work from its magnitude will demand further support from the city, perhaps entire municipal control. Though the problem may be a difficult one, we believe that in the hands of its friends it will be wisely worked out. Drs. Titian Coffey and C. W. Decker have done valuable work in co-ordinating the College Dispensary force and the District Nurses.

BOOK REVIEWS

A HISTORY OF NURSING. The Evolution of Nursing Systems from the Earliest Times to the Foundation of the First English and American Training Schools for Nurses. By M. Adelaide Nutting, R. N., Superintendent of Nurses, the Johns Hopkins Hospital; Principal of Johns Hopkins Training School for Nurses; President of the American Federation of Nurses; Member of International Council of Nurses; and Lavinia L. Dock, R. N., Member of the Nurses' Settlement, New York; Secretary of the American Federation of Nurses and the International Council of Nurses; Honorary Member of the Matrons' Council of Great Britain and Ireland and the German Nurses' Association. In two volumes, Illustrated, G. P. Put-

This work impresses the reader as being akin to the classics. The authors "The modern nurse, logically say: keenly interested as she is in the present and the future of her profession, knows little of its past. She loses both the inspiration which arises from cherished tradition and the perspective which shows the relation of one progressive movement to others. Only in the light of history can she clearly see how closely her own calling is linked with the general conditions of education and of liberty that obtain—as they rise, she rises, and as they sink, she falls."

The glimpses that are given in these two volumes of the practice of medicine in the long, long ago are deeply interesting. Many centuries before Christ the Hindoo required the physician to keep his hair and nails short; bathe daily and wear white garments. The surgeon must be a strong operator, and he must neither perspire, shake nor utter exclamations. The medicine chest of the wife of Pharaoh, Mentuhotep, 2500 B. C., contains six vases of alabas-

ter and serpentine, dried remnants of drugs, two spoons, a piece of linen cloth, and some roots enclosed in a basket of straw work. It was found in the Queen's tomb.

Hippocrates was born 460 years before Christ. He openly recognized Nature and taught that disease was not the work of spirits, demons or deities, but resulted from disobedience to natural laws. Possessed of a master mind and unequaled powers of observation and reflection, he was equally modest, had no mysteries, and taught openly all that had been previously jealously guarded . . . discarding both superstition and hypothesis.

The early French and Spanish hospitals in America make an interesting chapter.

Much of the second volume is devoted to Florence Nightengale and her times.

Miss Linda Richards was the first trained nurse in America, and she is still actively at work. This is a noble work and fills a heretofore vacant space in the literature of medicine and nursing. It will find a place in every comprehensive library.

DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEY. By Robert H. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Assistant Professor of Pathology, University and Bellevue Hospital Medical School. Octavo of 536 pages, profusely illustrated, Philadelphia and London, W. B. Saunders Company, 1907. *Cloth, \$5.00 net; Half Morocco, \$6.50 net.

This book has to do with the more important diseased conditions of the

uro-genital tract considered from the view point of the general practitioner and the surgeon.

The former will find that the methods advised are those that the authors have found of personal value and they may be employed by any well-equipped practitioner who is familiar with modern medical and surgical technique. They have selected well in that the greatest amount of space has been devoted to those conditions and methods which are the most important and to the recent methods which are less familiar to the practitioner. The most space has been devoted to the urinary organs proper, less to the purely sexual disorders.

The medical and surgical aspects of the special diseases have each received full consideration in that the book is the joint work of a surgeon and a physician. The book consists of thirty full chapters, 513 pages.

I know of no better chapter, for the general practitioner, on endoscopy, cystoscopy and catheterization of the ureters than this book gives us. It will show him that once one is familiar with the process of catheterizing the ureters, the comparatively simple operations may be repeated as often as occasion demands. All should familiarize themselves with this manipulation for practically we do not possess an ideal segregator or urine separator. In our hands the best are the Harris instrument and those of the Luvs or Cathelin type, but they all have radical faults. The writers are entirely correct when they say that the ideal lubricant is vet to be discovered, we further agree that at the present time the best is that known as Formical, manufactured by John Carl & Sons, New York City. The authors correctly sound a note of warning to those who are overzealous in introducing instruments into the urinary

A relationship between numerous clinical manifestations that are common-

ly known as the uric acid diathesis and the actual uric acid excretion has never been satisfactorily established and we agree that there can be but little doubt that the amount of uric acid found in the urine has but slight clinical significance in most cases. We also agree that cases are occasionally met with in which albumin appears to be excreted physiologically in the urine, this of course applies only to specific forms of albumin, as the albumin of special articles of diet and we again agree that in nephritis the amount of albumin excreted must not be taken as a measure of the progress of the disease, although it is very commonly believed to be the case. Those forms of renal disease that have scar tissue in the kidney will usually excrete but a small amount of albumin no matter how serious the disease may be and conversely patients in good condition and doing well may continue to excrete large amounts of albumin.

I have long since concluded that the disappearance of albumin from the urine alone does not warrant us in concluding that the disease is abating nor does its persistent presence always indicate progress of the disease. The authors like best the cold Heller's test for albumin. We have the best results with Purdy's saturated sodium chloride and 50 per cent, acetic acid. Like the authors we find the pottassium ferro-cyanide test very delicate but it also throws down nucleo albumin, a distinct disadvantage. We are glad to note that the authors recognize the possibility of mistaking the diplococcus catarrhalis or even pneumonicocci for the gonococcus, and warn the inexperienced in this respect.

Another good point: When organisms grow on ordinary culture media it may be taken as positive evidence that they are not gonococci. The gonococcus grows sparsely even in the most carefully prepared soil. The authors agree with the more recent studies of the

urine which show that pathogenic bacteria may often be found in the urine under physiologic conditions. It is a fact that bacteria are often excreted by the urine in both pathologic and physiologic states without producing any local disease. In our work we have frequently noted the presence of the colon bacillus in the urine, more especially those with colonic stagnation chronic constipation and most interesting is it that an active purgative will cause the bacilli to disappear from the urine, to reappear as the intestinal fermentation occurs again. The writers consider massage or making pressure over the kidney and along the course of the ureter as one of the most valuable aids at our command for making the diagnosis of the presence of pus in the kidney, it also furnishes evidence of the presence of renal calculi, besides gaining general information as to the condition of the kidneys.

Without doubt the writers are entirely correct when they say that there is no more difficult problem in medicine than to make a comprehensive and accurate determination, from the clinical aspects, of the existence of Bright's disease, and to tell from these the precise lesions that occur in the kidney. Many times in my life cases that appeared clinically to be typical examples of one or the other forms of Bright's disease have surprised us very much at the autopsy. Cabot is undoubtedly very near the truth in his statements, which some have considered too radical and I have ceased to hope for an accurate anatomic picture of the kidney from the clinical findings or symptoms. It is the physiological possibilities of the crippled organs that I wish to know.

All who have kept at all abreast of the trend of affairs will agree when the writers state that more often than is generally conceded metabolic substances that result from abnormal breaking up of normal food products or tissue, or those that follow from the natural disintergration of abnormal metabolic substances—materials exciting inflammatory reactions—are brought to the kidney. Therefore it becomes the duty of the physician to study the metabolic functions of his patient as fully as possible. Early detection may prevent renal disease, or if it exists, may prevent serious complications. The old theory that the chemic and miscroscopic examinations of the urine is a safe guide has now become to a great extent obsolete, in some cases absolute diagnostic evidence may be entirely wanting.

In considering the climatic conditions most favorable for chronic nephritis it seems odd that California should receive no mention at all, either for or against.

Decortication is discussed but the authors do not advise it.

As uremia often occurs independent of clinically recognizable Bright's disease the writers have discussed it as though it were a disease entity and Osler's classification of the disease by its symptoms has been adopted. There is no disease of the urinary tract in which our knowledge is in a more confused state than tuberculosis of the kidneys, therefore any contribution that contains the personal experience of a careful observer is always of value. Such a chapter is the one in this book and it is a very valuable one. have in the past neglected too much the lessons which have been brought to us in regard to the management of general tuberculosis when we come to apply them to cases of renal disease." Little is to be expected from medical treat-The authors have met with no good results from tuberculin treatment and they have finally come to rely on general surgical treatment, preferably of a conservative nature, operative measures are not advocated, especially when both organs are involved, except when distinctly surgical conditions such as pyonephrosis, not amenable to medical or local treatment, are present. Of course a tubercular pus cavity in the kidney is subject to the same surgical laws that govern the treatment of a like lesion in any other organ.

This book contains a great many sane and trite sayings. A physician whose belief is that a great many ills are dependent upon floating kidney would naturally be led to regard as a displacement or as excessively mobile an organ that another observer, of a more conservative type, would consider within the normal. We cannot however agree with the authors that typical cases always manifest "Dietl's Crisis." Nor is it possible at this time to agree with this statement that the most frequent tumor that occurs as primary growth in the kidney is a hypernephroma or "struma pipomatedes aberratae renis," a Grawitz.

Space forbids a further review of this very interesting book, it is unhesitatingly recommended to both the general practitioner and the surgeon.

W. A. E.

DIAGNOSTICS OF DISEASES OF CHIL-DREN. By LeGrand Kerr, M.D., Professor of Diseases of Children at the Brooklyn Post-Graduate Medical School. Octavo of 542 pages, illustrated. Philadelphia and London, W. B. Saunders Company, 1907. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

The child under two years of age offers the greatest diagnostic contrasts to the adult, and the examination of children offers differences which do not confuse us in the adult.

These very differences relate closely to etiology, pathology, symptomology, diagnosis and treatment.

In the child we can rarely take advantage of both the subjective and the objective symptoms nor can we secure a clear history of the present and previous conditions; the infant cannot define his feelings and an older child's statements are not always reliable. The over-anxious parent and the stupid and disinterested nursemaid introduce an-

another element of uncertainty. Both are apt to be inaccurate.

We are therefore almost entirely confined to the objective symptoms of disease, hence such books as Kerr's become of great value. The book is written more for the general practitioner and advanced student than for the expert pediatrist. Just so much of etiology and pathology has been included as is useful in diagnosis and so with sequellae, only those are considered which are helpful in the identification of immediate or possible dangers.

The book is written just as the child is approached in the sick room with the idea of making a diagnosis, a plan which makes it very useful to the student or one who is commencing to specialize in Differential diagnosis has pediatrics. not been considered separately, but it takes up a part of the primary diagnosis, which, to us, seems a very good arrangement for the student. One will find the book to be a reliable bedside guide in diagnosis. No moot questions have been introduced but the diagnostic factors have been taken up in a sane, rational manner, one after the other, just as one should think them out when endeavoring to determine the ailment from which our little patient is suffering.

Such a book is of necessity somewhat diagnostic but this is not a disadvantage when teaching diagnosis, it is in fact a necessity. Perhaps, however, this point is strained a little when icterus is stated to be the first symptom of real diagnostic value in gastroduodenitis. It is of course of value, but it may not arise at all.

The diagnostic description of pyloric stenosis could with propriety be amplified. The diagnostic of the greatest aid, the presence of a palpable pyline tumor, is not mentioned at all.

The author's suggestion that all cases of supposed acute attacks of indigestion be examined after a subsidence of all symptoms, in many instances a careful palpation would reveal a slight thickening and induration about the region of the appendix, and the true nature of the attacks would be discovered, is to our mind a valuable truism.

That the value of a blood count is doubtful in children with appendicitis is in accord with my experience, for practical general work it may be considered as useless.

The illustrations are well executed and add a great deal to the text, they are not overabundant and show considerable judgment and care in their selection.

The book may be commended to all who wish to inform themselves of the very important and somewhat difficult field in Pediatrics.

W. A. E.

THE TREATMENT OF FRACTURES: With Notes Upon a Few Common Dislocations. By Chas. L. Scudder, M.D., Surgeon to the Massachusetts General Hospital. Sixth Edition, Revised and Enlarged. Octavo Volume of 635 pages, with \$54 original illustrations. Philadelphia and London, W. B. Saunders Company, 1907. Polished buckram, \$5.50 net; Half Morocco, \$7.00 net.

This book from its first to its sixth edition has been constantly on my shelves. It is now larger by almost two hundred pages and each edition has shown careful revision and selection of new illustrations and new matter.

The book at once won a place for itself which it has maintained with increasing and well deserved popularity.

Throughout all this time the original purpose of the book has been kept in mind—the presentation in concise and illustrated form of efficient methods of treating the common fractures of bone.

The main changes to be noted in this edition are a fuller consideration of the desirability of operating upon certain fractures; the addition of new illustrations and shadowgraphs; the remote results following trauma to the head; obstetrical skull fractures of the new born, fractures of the zygoma, of the malar bone, of the superior maxilla; of the head and neck of radius, of the neck

of femur of the carpal scaphoid; to unreduced dislocations of the elbow, to aeromioclavicular dislocations, to pathological fractures, to old fractures of the radius and Volkmann's contracture.

The author states that a most important problem for solution is the successful treatment of ununited fractures. With this we are heartily in accord, but imagine one's disappointment when he turns to page 266 and finds the whole subject dismissed in less than a page of the most general statements with little specific information, certainly nothing that is new, and with no mention of Bier's hyperaemia.

The printing shows evidence of hurry, the illustrations on page 122 of this copy are badly blotted and smeared with ink.

I imagine this valuable book is in the library of most surgeons, it should also become the property of all general practitioners.

W. A. E.

THE PANCREAS: ITS SURGERY AND PATHOLOGY. By A. W. Mayo Robson, D.Sc. (Leeds), F.R.C.S. (Eng.) of London, and P. J. Cammidge, M.D. (Eng.) D.P.H. (Camb.)! of London. Octavo Volume of 546 pages, fully illustrated. Philadelphia and London. W. B. Saunders Company, 1907. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

The present volume is really a second edition for amplification of the book "Diseases of the Pancreas" published in 1903 by Robson and Moynihan, a book which at that time marked a very decided advance in our knowledge of the diseases of a very obscure organ.

This volume is larger by two hundred and fifty pages and richer in illustrations, although a number of illustrative cases and illustrations have been reproduced from the former book, which by the way has been out of print for some time.

Our present knowledge of the physiology, pathology and surgery of the pancreas has been so greatly added to in the last five years that this book is really a necessary acquisition to one's library.

The pancreas has been removed from

the position of a mere accessory digestive gland to the rank of a structure indispensable to metabolic needs of the individual.

The enormous literature of today shows the great advances that have been made in our knowledge and it is a long step in advance from Senn's publication in 1886 to the volume now under review.

The author has very wisely, briefly but fully considered the comparative anatomy, the physiology and the development of the pancreas in order to show that the symptomology and pathology of the organ may be intelligently studied. Much attention has been given to the structures and supposed functions of the group of cells known as the islands of Langerhaus. The authors are of the opinion that the balance of available evidence strongly points to their being independent structures related to the control of carbohydrate metabolism within the body that the pancreas undoubtedly exerts. In spite of all advances we are still very much in the dark as to our knowledge of the relation of the pancreas to diabetes. We are to a very large extent confined only to a study of the urine and the feces in diseases of the pancreas, as yet the value of the socalled "Pancreatic reaction" in the urine is undecided, although the method described in this volume is an advance over that of 1904. The difficulty of the investigation is marked and it requires very large amounts of urine from a suitable case. As yet we cannot rely alone upon the pancreatic reaction in making a diagnosis of pancreatitis, or malignant disease of the pancreas. Some writers have made the error of considering the "Pancreatic reaction" as pathognomonic, which at present, at all events, it certainly is not.

The examination of feces is only now becoming a routine practice, it has long been delayed, mainly we think on account of the unpleasant nature of the manipulations. The color of the stools have been studied for many years and the authors think that at least in pancreatic disease they have discovered the true reason for colorless or white stools.

A careful reading of the chapter on the general symptomology and diagnosis of diseases of the pancreas will show the general practitioner that with due care diseases of this organ may be diagnosed with a fair degree of accuracy, we must no longer think that disease of the pancreas is unrecognizable during life. We can no longer consider that most of our knowledge of the disease of the pancreas is secured in an accidental manner, but we can conclude that even to those who pretend to superior skill and knowledge the diagnosis of diseases of the pancreas is a very difficult problem. No matter how careful our study, the pancreas can rarely be made the central or dominating factor in a symptom complex. For example—a pancreatitis due to catarrhal duodinitis may and often does give rise to a more or less persistent jaundice and in the experience of Robson and Cammidge is the most common cause of conditions known as acute and chronic "Catarrhal jaundice."

The authors think that it has been demonstrated that a small portion of normal pancreas is capable of averting the onset of the condition known as diabetes. Just here is the practical utility of recognizing early the onset of pancreatic disease in order that early and active treatment may remove conditions which are likely to produce pancreatic lesions that may permanently injure the gland. This is the reason that we are all now agreed upon the desirability of early treatment of gallstones, particularly those in the common duct, and when an examination of the urine and feces shows that pancreatic disorders exist. Duodenal catarrh and its

frequent associate, catarrhal paffcreatitis, always demand prompt and often radical attention.

Perhaps the most valuable advance in our recent knowledge is the recognition of the close similarity of the symptoms of cancer and chronic pancreatitis in the head of the gland. The hardened head of the pancreas has been frequently considered to be malignant and nothing being done at operation, the recovery of the patient has proven the error in diagnosis and on the other hand many cases of hardened pancreas in the past have been allowed to die unaided by surgery because it was thought that they were suffering from cancer. On this account the chapter on chronic pancreatitis and cancer are of great practical value as are the chapters on pathology and symptomology.

Most of the illustrations are original and are from specimens in the collection of the authors and many others are drawings from specimens in the various museums, so that they are all of value and add much clearness to the text.

A very valuable feature is the list of important papers and publications at the end of each chapter, placing one readily in possession of the recent and relevent literature.

W. A. E.

A TEXT-BOOK OF MINOR SURGERY. By Edward Milton Foote, A.M., M.D., Instructor in Surgery, College of Physicians and Surgeons (Columbia University); Lecturer on Surgery, New York Polyclinic Medical School; Visiting Surgeon, New York City Hospital; Visiting Surgeon, St. Joseph's Hospital; Consulting Surgeon, Fandall's Island Hospital and Schools, formerly Chief in Surgery at the Vanderbilt Clinic. Illustrated by 407 Engravings from Original Drawings and Photographs. D. Appleton & Company, New York City and London.

"This book is dedicated to the Man at the Point of the Knife for his grit and patience, and especially for his willingness to be photographed that others may profit by his misfortune."

This is splendid, such a Rooseveltian dedication whets one's appetite for what is to come, and the reading will prove the value of the text. The importance of minor surgery is not sufficiently recognized in the curriculum of the medical schools. It is the less serious, every-day problems of surgery that we should have at our finger tips; it is the minor surgery which forms the bulk of surgical practice, it is the only field into which the average practitioner will ever enter. If the physician is untrained and untaught in minor surgery his results will be disastrous for this reason, for example there is more bad surgery performed upon the hand than upon the organs of the abdomen.

The author has been eight years in preparing this book, it has been rewritten several times, and he has drawn extensively from his ten years' daily service in the surgical department of the Vanderbilt Clinic, New York, with an average annual attendance of about four thousand new patients, together with surgical teaching and attendance at other schools and hospitals.

The book is freely and well illustrated, the selections have shown a good deal of care and thought, and many of them are original.

The book is replete with wise aphorisms, thus: It should be an invariable rule never to pass a probe into a wound, especially a wound of the scalp. The regional division of the subject matter has some disadvantages, for example we find fracture of the humerus on page 371, but we do not reach fracture of the fibula until we come to 502. The various fractures have been very well considered and the author has shown good judgment in not making these chapters too voluminous but at the same time giving the essential facts in diagnosis and treatment.

Curiously enough he does not seem to mention the occurrence of carbuncles with diabetes.

We commend the book not only to the younger surgeons, but to those who while they are not experienced surgeons

still do not limit themselves strictly to a medical practice. To such for example the sections on infections of the hand will prove of great value, they will show the unqualified man that he should hesitate to undertake the tendon sheath infections until he has made himself familiar with the situation and its possibilities of grave import. Along these same lines we would like to have seen a more full discussion of the surgical treatment of mammary abscess, on account of its frequency and importance in minor surgery, and too, we would wish a full reference to Bier's hyperemia treatment of various surgical disorders, but this will no doubt come with a later edition which the excellence of the book will soon demand.

The book is published in a very attractive form and will prove a distinct advantage in its own field.

W. A. E.

CLIMATE CONSIDERED ESPECIALLY IN RELATION TO MAN. By Robert De Courcy Ward, Assistant Professor of Climatology in Harvard University. Illustrated; 273 pages, 26 illustrations. New York, G. P. Putnam's Sons; London, John Murray, 1908.

This excellent treatise is intended for lay as well as medical readers and is based on lecture notes which Professor Ward has been accumulating during the last decade in his course on general climatology, given at Harvard Uni versity. His thought has been to present the subject-matter in co-ordinated form so that the broader principles of climatology might be easily grasped. different climatic zones, general and special climatic types, the relation between climate and the more important diseases and the life of man in the tropics, the temperate and the polar zones are some of the topics considered The book is illustrated with thirty-four cuts which add greatly to the value of the work.

Professor Ward has discussed his subject along somewhat different lines than is found in most books on elimate and yet to most excellent advantage. While written in one sense, in a popular style, scientific accuracy is not lost sight of, and the author's broad command of his subject makes this book one which should not only serve well a real demand from lay readers, but one also in which medical men may find much that is both instructive and interesting.

THE COMMON SENSE OF THE MILK QUESTION. By John Spargo, author of "The Bitter Cry of the Children," etc. Cloth, 351 pages. New York. The Macmillan Company, 1908. All rights reserved.

This volume is dedicated "to Mr. Nathan Strauss, a pioneer in the great work of saving infants from needless slaughter, with the author's profound admiration and gratitude."

In his earlier work on "The Bitter Cry of the Chi¹dren," Spargo expressed the opinion that pasteurization was a "grave mistake." In this present book, he modifies this statement in that he believes that pasteurization is a "makeshift" but for the present somewhat of a necessary makeshift.

He classes himself as being above all else an adherent of the "Clean Milk School," holding that what is needed is a germless, clean supply rather than attempting to sterilize dirty milk.

Personally, we believe Spargo's point has been well taken. To demand at once, for large centers of population like New York, an absolutely clean milk is virtually out of the question. Until the public and the milk dealers are educated as to what a "clean milk" means and how it is produced, pasteurization may be made to serve an excellent purpose, and this on the principle that a pasteurized milk is responsible for fewer deaths than a dirty milk. When all citizens are once acquainted with the details of the milk problem, then the makeshift of pasteurization will be unnecessary, since clean milk renders need less any pasteurization.

Spargo has done a magnificent service to the country in bringing out this book for his style is clear and interesting and

he has portrayed the awful conditions now existing in dairies, the most awful morbidity and mortality resulting therefrom and the extreme difficulty in bringing about a better condition of affairs, in most graphic fashion.

Spargo states that he has written this book in the hope of providing a statement that the average citizen would be able to comprehend, since the solution of this most difficult problem, in its politico-social aspects especially, can come about only through the co-operation of lay citizens.

This book should come with special force to our own community because of the faulty conditions here existent in Los Angeles, and because of the lukewarm support which is being given to the certified milk commission in its efforts to bring about a better condition of affairs.

Without being anything like *The Jungle*, this work of Spargo's presents facts as vivid and as important. If it could get into the homes of our people, we are certain it would be read and that it would be productive of a vast amount of good. The paper, the type, the illustrations, the style, the contents are all

of excellent character and we commend the volume as a desirable and needed addition to the libraries of our readers.

DISEASES OF THE HEART. By Prof. Th. von Jurgensen, of Tubingen; Prof. Dr. L. Krehl, of Greifswald; and Prof. Dr. L. von Schrotter, of Vienna. Edited, with additions, by George Dock, M.D.. Professor of Medicine, University of Michigan, Ann Arbor. Octavo of 848 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5 net; half morocco, \$6 net.

This book might almost be termed a classic, so thoroughly does it cover the subject-matter embraced in its title. In these pages are found discussions based not only on most extensive anatomic, physiologic and pathologic knowledge. but on clinical experiences of the broadest kind. One might say that all the research of German investigators in this interesting and extensive field of internal medicine is gathered in this volume which Dock of Michigan has so ably edited. In addition to the original work and the adaptation of the medical preparations to the U.S. Pharmacopoeia. Dock has included new matter in brackets. We heartily commend this book to all who would have an authoratative treatise at their command

MISCELLANEOUS

The total population of France (in Europe) is 38,350,788. The female sex exceeds the masculine in number, the figures being, respectively, 19,533,899 and 18,816,889. On the other hand, an excess in the number of the unmarried is shown on the masculine side, the respective figures being 9,917,178 and 9,114,356. There are 2,384,897 widows and divorced women, as against 1,005,884 widowers and divorced men.

The number of French families is 9,781,117, of which 1,314,773 are without children; 2,249,337 have but 1 child; 2,018,665 have 2; 1,246,264 have 3; 748,841 have 4; 429,799 have 5; 248,159

have 6; 138,769 have 7; 71,841 have 8; and 33,917 have 9 children. These figures represent, in a rapidly decreasing proportion, the number of families having a larger number of children. Upon comparing these groups of figures, it will be perceived that for about two-thirds of the families of France the average number of children does not exceed 3; while for about 1½ per cent of them, the average number is 7; and for less than 1 per cent of the same, 8 children. Twenty-four families are recorded, however, as possessing 17, and 34 as possessing 18 children.

BARLOW MEDICAL LIBRARY NOTES.

The attention of physicians is called to the change in the hours of opening at the Barlow Medical Library.

The Library will be open hereafter every afternoon from 1 to 5 p. m., and on Tuesday, Thursday and Saturday evenings from 7 to 10 p. m.

This change of hours has been made in response to requests from several sources, and in the hope of making the Library of greater use to a larger number of the medical profession.

The Library is well lighted and ventilated, and the small study rooms give plenty of opportunity for quiet work. Besides many standard medical works, and the principal journals of this country, the Library has a subscription list of over sixty of the most important toreign periodicals. With this equipment and a librarian in attendance ready to look up the literature needed, the Library is an ideal place for study, and should be used constantly by all of our California doctors.

The trustees in their management of the Library are working to make it a center, where can be found all the best and latest literature on medical subjects, and where not only the physicians of Los Angeles, but the whole profession of Southern California may find inspiration and help in their work for the benefit of humanity.

Do not destroy any literature on medical or allied subjects until you have consulted the Barlow Medical Library.

If you have a lot of medical or scientific books, periodicals or pamphlets stored in the garret or cellar, do not call in the junk man; first call B 6290, or send a post card to Librarian, Barlow Medical Library, 740 Buena Vista street. We will gladly send a man, if necessary with a wagon to remove them.

If outside of city send by freight, if a large amount, or by express if a small package.

CHEMISTRY OF GALL STONES.

Cholesterin is probably an accumulation residue of the hydrolysis of carbohydrates by the epithelium of the gallbladder and bile passages, and is also a product of nerve metabolism. It is converted into stercorin in the bowel. Cholesterin constitutes normally about 2 per cent of the total solids of the bile, being held in solution by the biliary salts. When in excess of the solvent action (diminished in cholecystitis) of these salts, it crystallizes out, forming gallstones, their formation being favored by catarrhal conditions, stagnation of bile and the presence of attenuated bacteria (typhoid or colon bacilli).

Pure cholesterin stones are white, soft. greasy and friable and float on water. Gallstones usually have a nucleus of epithelium or bacteria, and are cemented with mucus or lime soaps. Pigment stones (calcium bilirubinate) often contain copper and iron and sink in water. "Onion stones" consist of alternate lavers of cholesterin and calcium bilirubinate, the formation of the latter being favored by catarrh of the gall-bladder (acid mucin and calcium in mucus). The average composition of gallstones is 70 to 80 per cent cholesterin, with pigments, but they are sometimes made up mainly of pigments or calcium carbonate.

Gallstone colic and soreness are most frequent in stout, elderly women, by reason of their sedentary ways, proneness to a diet of sweets and starches and constipated habit. Gall-bladder attacks usually occur at night, because of distension of the sac with bile, owing to the longer interval between meals.

Gallstones are commonly multiple and have a tabloid or polygonal form, the faceting being due to friction in the bile-bladder. Cholesterin is insoluble in water, acids or alkalies, but is readily dissolved *in vitro* by ether, chloroform and fixed or volatile oils. The benefit derived at times from the use of these reagents as remedies for cholelithiasis probably depends on their relaxant and

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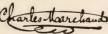
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soothing action rather than on their solvent properties. Olive oil causes the passage of pseudo-calculi composed of lime soaps. A simple test for cholesterin is to dissolve a part of the supposed gallstone in chloroform, add an equal volume of sulphuric acid, and shake, getting a blood-red color, which

turns cherry and purple with green fluorescence. A more delicate method is to let evaporate a solution in warm alcohol and ether, then examine the residue microscopically for the thin, colorless, transparent plates, with notched corners, of cholesterin.—Denver Medical Times (Editorial).

MILK'S COMPARATIVE VALUE AS FOOD.—Farmer's Bulletin No. 74, issued by United States Department of Agriculture, contains the following table:

Cost of nutrients in milk as compared with other food materials.

Food materials	Whole milk.		Skim milk.	
	Amount.	Cost at 6 cents per quart.	Amount.	Cost at 3 cents per quart.
One pound of— Beef— Round furnishes protein equivalent to Round furnishes fuel value equivalent to Shoulder clod furnishes protein equivalent to Shoulder clod furnishes fuel value equivalent to Sirloin furnishes protein equivalent to Sirloin furnishes fuel value equivalent to Mutton loin furnishes protein equivalent to Mutton loin furnishes fuel value equivalent to Mutton loin furnishes fuel value equivalent to Pork—	1.3 2.9 1.2 2.4 1.6 2.0	Cents. 16 8 17 7 14 10 12 13	Quarts. 2.7 2.6 2.9 2.5 2.4 3.2 2.0 4.4	Cents 8 8 9 7 7 10 6 13
Fork— Fresh, furnishes protein equivalent to. Fresh, furnishes fuel value equivalent to. Salt, fat, furnishes protein equivalent to. Salt, fat, furnishes fuel value equivalent to. Smoked ham furnishes protein equivalent to. Smoked ham furnishes fuel value equivalent to. Chicken furnishes protein equivalent to. Chicken furnishes fuel value equivalent to. Salt cod furnishes protein equivalent to. Salt cod furnishes fuel value equivalent to. Oysters, "solid," furnish protein equivalent to. Wheat flour furnishes fuel value equivalent to. Wheat flour furnishes fuel value equivalent to. Wheat flour furnishes fuel value equivalent to. Wheat bread furnishes protein equivalent to. Wheat bread furnishes protein equivalent to. Beans, dried, furnish protein equivalent to. Beans, dried, furnish protein equivalent to. Potatoes furnish protein equivalent to. Potatoes furnish protein equivalent to. Turnips furnish protein equivalent to. Turnips furnish protein equivalent to. Turnips furnish fuel value equivalent to.	2.1 2.3 5.7 2 0 2.5 2.5 2.4 5.5 1.9 1.7 2.5 1.4 1.9 3.3 2.4 1.9 3.3 2.4	13 13 2 34 12 15 13 3 14 3 11 2 10 15 8 11 20 14 2 3 3 11	2.1 4.1 .3 11.3 2.0 5.0 2.2 1.0 2.4 1.0 1.9 7 5.0 1.4 3.7 3.3 4.8 4.8	6 12 1 34 6 15 7 3 7 3 6 2 5 15 11 10 14 14 1 1

THERAPEUTICAL HINTS

Dr. Justin Herold of New York City recommends Glyco-Thymoline, one ounce to one pint of water, for vaginal irrigation in the treatment of catarrh of the female genital organs.

Gonorrhea is in the majority of instances the cause of vaginitis. Vaginitis is treated first by douching the parts with a solution of Glyco-Thymoline, one ounce to a quart of hot water, ap-

plying strips of cotton or gauze saturated with the solution and left in place for twelve hours, even may be repeated more frequently than twice a day. This may be alternated with other antiseptic and astringent solutions. In other and severe forms of vaginitis, douching and irrigation of the parts with Glyco-Thymoline may be practiced with advantage and after the application



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The Discomforts of Anaesthesia are vividly set forth in a paper by Agnes Pillow. (Cleveland Medical Journal) viz.:

Nausea, backache, numbness of limbs, pains in the head, abdomen, abdominal wall, viscera, chest, etc. Irritation of skin, nose and throat or eye, sore mouth and tongue or lips. Nervousness, faintness, etc., etc.

These may all be avoided by the use of "KELENE" pure chloride of Ethyl, (Fries Bros.).

In General Anaesthesia, it gives the utmost satisfaction as preliminary to ether or chloroform, with entire freedom from disagreeable or dangerous after effects. Complete anaesthesia in thirty seconds.

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The manufacture of antikamnia and codeine tablets guarantee the purity of every grain of codeia which enters into their tablets. This not only prevents habit and the consequent irritation which follows the use of impure codeia, but it does away with constipation or any other untoward effect.

The confirmatory findings of such eminent authorities as Professor Kalusowski, of the George Washington University, Washington, D. C., and Professor William M. Gray, of the Army Medical Museum, Washington, D. C., and the opinions, based upon repeated clinical tests, expressed by exacting and conservative practitioners, are, we believe, sufficient to establish the contention that Tyree's Antiseptic Powder is superior to any other product of a kindred nature, and that it affords results which cannot be obtained by the employment of its components when they are extemporaneously combined. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

The substantial success won by Gray's Glycerine Tonic Comp. during the past

fifteen years is the strongest possible evidence of the good faith that has constantly been kept with the medical profession. To prescribe an original bottle of Gray's Glycerine tonic Comp. is to insure a maximum of benefit to a patient, and a minimum of uncertainty as to the desired results. When other tonics fail to prevent bodily decline, Gray's Glycerine Tonic Comp. will prove a veritable sheet anchor.

Dr. M. A. Fechheimer, of Detroit. writing on "The Treatment of Chronic Gonorrhea" (Detroit *Medical Journal*. March, 1908), says: "Arhovin is useful in those cases where there appears to be an irritation of the prostatic urethra. and acts in a very beneficial manner."

Over sixty years ago; the Pond's Extract Company began the preparation of Pond's Extract, selecting therefor the best and most luxuriant growths of the shrub at the season of the year when richest in extractive material, and perfecting a process whereby an extract of uniform strength and efficiency was produced. As a consequence, during all these years Pond's Extract has been the standard product of its class, and its purity, unvarying quality and reliable remedial action have created a wellgrounded confidence that has naturally led to its preferment by the medical profession.

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Opsonic Theory

Demonstrates the Scientific Value of

Antiphlogistine

(Inflammation's Antidote)

THE resisting power of the body against disease is relative to the opsonic value of the blood and the severity of a localized disease process depends largely upon the retardation of the flow of the blood to that part.

The phagocytes may gather, but unless they receive the full amount of the normal flow with its opsonins, resisting power is lost and suppuration takes place. We must either increase the opsonic index of the blood so that the small amount flowing through the infected part may be of normal opsonic value, or, what is simpler and as effective, dilate the blood-vessels and let the blood, with nature's own method of combating disease, circulate through the area desired.

Heat dilates the blood-vessels, but to be effective it must extend to the periphery of the infected area, when it will not cause suppuration by increasing the bacteria. An antiseptic poultice is the best method of conveying heat. There is but one method of poulticing which commends itself to thinking physicians, and that is with the antiseptic, hygroscopic, plastic dressing—

Antiphlogistine

(Inflammation's Antidote)

NURSES.

SCHOOL FOR NURSES.

Alumnae Notes California Hospital.

The usual monthly meeting of the California Nurses Alumnae Association was held at the California Hospital Nurses' Home, 1415 South Grand avenue, Monday, May 4, 1908. The meeting was well attended. Miss Johnson was absent and Miss Humphries acted as President Pro Tem.

Three new members were voted into the Alumnae Association. The principle business was the arrangements concerning the annual reunion and reception of graduates.

Miss Bates gave an interesting talk. Her subject being "My Experience as a Post-graduate in a New York Hospital."

The meeting was then adjourned.

Sunday, May 2, was an eventful day in the history of the California Hospital Nurses' Alumnae Association, for upon that day our delegates boarded the train for San Francisco and anon, in search of the National Convention of Nurses to be held in that city May 5, 6, 7 and 8.

We regret that our worthy president, Miss Johnson, was precluded from attending this convention. Was it Fate or was it a little delinquent stranger who raised her baby hand and barred Miss Johnson's entrance into the Golden Gate?

Our delegates were Miss Williamson, Assistant Superintendent of the California Hospital; Miss Waller, Superintendent Bard Memorial Hospital, Ventura, Cal., and Mrs. E. P. Durbin, editor of "The Record Sheet."

Miss Franklin remained in San Francisco for the convention and Miss Louise Hadden, post-graduate of the California Hospital, was a delegate for her Alma Mater in Brooklyn, N. Y.

We feel a certain pride in being able to send such good women to represent us. They convey a message of truth and those intelligent representatives of the Associated Alumnae of the United States will discern the truth when they hear it.

Mrs. Harshaw Wilson and Miss Elizabeth Hogue are now in Japan. They say that everything in Japan seems diminutive and that they are real curiosities on account of their height.

Miss Cassarina has returned from Ventura to take up nursing in this city.

The California Hospital Nurses' Alumnae Association extend a vote of thanks to the Board of the California Hospital for their generosity in helping send delegates to the National Convention of Nurses.

Miss Clare Hardison has returned from Sacramento.

Miss D. Walters has gone to Montreal, Can., to take a post-graduate course of one year.

Miss Lillian Simpson left on Sunday, May 2, for Boston, Mass., where she will probably be with a patient for three months.

Post-graduates lately taken into the California Hospital are Miss Hilda M. Jones, Orange Memorial Hospital, Orange, N. J.; Miss Margaret M. Fitzgerald, Indiana State Soldiers' Home Hospital; Miss Stella J. Baker, same hospital.

The California Hospital nurses were well represented at the meeting of the County Association. The subject of a Central Directory was changed from a discussion into a lively debate.

A TROLLEY HOSPITAL.

A hospital car was recently placed in service on the street railway lines in Milwaukee. The interior of the car is fitted with three leather upholstered permanent stretchers. Hooks are placed in the side near the ceiling, from which a fourth stretcher may be suspended. At either end of the car are stationary cabinets supplied with complete surgi-

cal outfits, consisting of all necessary instruments, as well as dressings that might be called for in emergency cases, when time is precious. The car is electrically heated, and water in a two-gallon tank fed from a larger receptacle may be heated in the same manner. The car is not designed for city work, but in outlying districts, far removed from a hospital, first aid will be direct on the ground instead of bringing the sufferer to the city. The car was built and equipped after plans prepared by Dr. C. H. Lemon, of Milwaukee.

EFFECTS OF HOT AND COLD BATHS. Cold baths contract the superficial vessels and cause later dilatation, with increased blood pressure and slower and stronger pulse. Cold baths increase metabolic change, with increased consumption of oxygen and increased elimination of carbonic acid. Hot baths de-

crease tissue change, as shown by decreased oxygen consumption and decreased elimination of carbonic acid. Cold baths make respiration slow and deep. Hot water makes the breathing rapid and shallow. Cold baths stimulate the nervous system by exciting the nerve endings and stimulating the nerve centers. Cold baths distinctly stimulate the muscles. Hot baths lower the excitability of voluntary and involuntary muscles, as shown by their power to overcome muscular spasm.—The Chicago Clinic and Pure Water Journal.

When Senator Hoar learned that a friend, who they thought had appendicitis, was in reality suffering from acute indigestion, he smiled genially. "Really," said he, "that's good news. I rejoice for my friend that the trouble lies in the table of contents, rather than in the appendix."



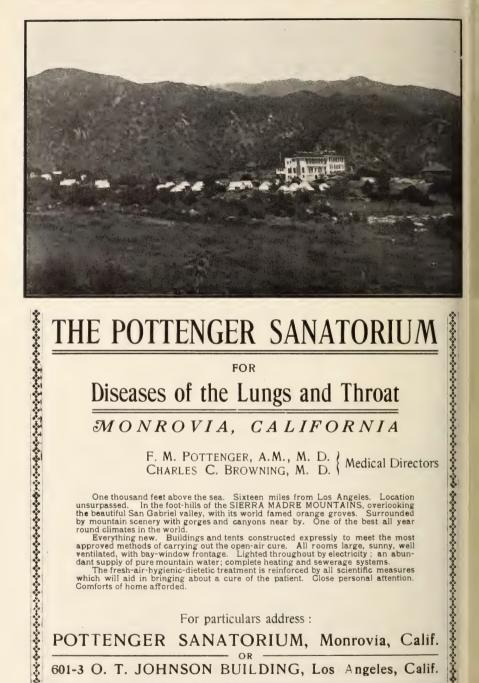
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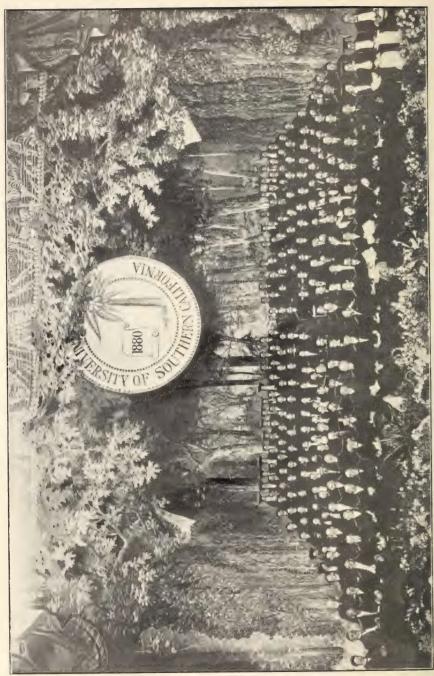
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Vol. XXIII.

Los Angeles, July, 1908.

No. 7.

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DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW, Associate Editors.

INFLUENZA-ITS ETIOLOGY AND BACTERIOLOGY.*

C. W. DECKER, M.D., SUPERVISING CLINICIAN OUTPATIENT DEPARTMENT, COLLEGE OF MEDI-CINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

A brief historical sketch of La Grippe may be of interest before taking up the subjects especially to be considered in this paper.

Our earliest knowledge of La Grippe or Influenza dates back to 1173 in Italy, Germany and England. It was not until 1510, however, that it was recognized as an epidemic or pandemic disease. There has been since the sixteenth century several great pandemics occurring at intervals of from four to one hundred years.

The last century saw four great pandemics—that of 1830-33, 1836-37, 1847-48 and 1889-90. Of these the last furnishes the bulk of literature devoted to this disease. The Berlin Society of Internal Medicine, at the request of its president, von Leyden, made a report, "The Influenza Epidemic of 1889-90," in which one thousand contributions are noted for the two years '89 and '90. Many of these record careful scientific investigations. The completeness of the Local Government Boards' report by

Parsons, and Leichtenstern's masterly article in Nothinagel's Handbuch are especially worthy of notice. Pfeiffer's work upon the Etiology of Influenza marked a new epoch in our study of this disease.

Most of the great pandemics have started in the Far East. The rapid strides of the 1889 pandemic to all parts of the world is characteristic of them all. Starting at Buchara in May, 1889, in three months it had reached Moscow, in four the Caucasus were passed and St. Petersburg attacked. Berlin succumbed by the fifth month and in another the disease had invaded London and crossed to New York. By the end of a year all countries were paying tribute to Influenza and it stood, Alexander-like, with no more to conquer.

At the present writing another great wave is sweeping across this country. Early in January, 1908, 650,000 cases were reported in Chicago. Many other eastern cities have fared little if any better. In Los Angeles the disease is

^{*}Read before the Los Angeles County Medical Association, February 7, 1908.

widely prevalent, though at the present writing exact statistics are not available.

It is fortunate that the mortality rate, of a disease which attacks such a large proportion of our population, has always been low. Statistics of 55,263 cases reported in the German army show a mortuary record of about 0.1 per cent. In Munich 22,972 cases taken from the civil population show a much higher mortality, 0.5 per cent. Influenza Pneumonia was the cause of over one-half of these deaths.

Epidemic Influenza runs a course of from six to eight weeks; however, after every great pandemic the disease seems to be endemic in certain localities. This is probably on account of atmospheric, soil or other conditions peculiar to that place being favorable to the growth of the specific organism we believe causes Influenza.

This brings us to the "Bacteriology of Influenza or La Grippe." During the 1889 epidemic, Pfeiffer made many unsuccessful attempts to discover the specific cause of this disease. It was not until 1892 that his efforts were crowned with success. He isolated and was able to grow upon blood ager a bacillus which abounded in the purulent bronchial secretions of patients suffering from epidemic Influenza. About the same time Kitasato isolated the same bacillus, and P. Canon found them in the blood. This bacillus is very small, measuring 0.5u to 1.5u in length by 0.2u to 0.3u in thickness; about the thickness of the bacillus of mouse septicemia and one-half as long.

Usually the bacillus occurs singly or united in pairs, more rarely chains of three, four or more bacilli can be demonstrated. It is Gram negative, and is with difficulty stained with the ordinary aniline dyes. It stains best with Ziehl's solution diluted with nine parts of water, or with Loeffler's methylene blue solution, with heat. When not too deeply stained the two ends of the bacil-

lus appear much darker than the middle portion. At times this gives it the appearance almost of a diplococcus. capsule has been demonstrated. It is a non-motile, aerobic bacillus, and does not form spores. On most culture it will not grow below 26° C or above 44° C, or in the entire absence of oxygen. It grows best at 37°C upon the surface of ordinary nutrient media containing haemoglobin. Pfeiffer has shown by a series of careful experiments that haemoglobin is the part of the red blood cell necessary for the growth of the Influenza bacillus. This fact eliminates many influenza-like organisms that grow upon ordinary media not containing haemoglobin.

A characteristic feature of the Influenza bacillus is that the colonies tend to remain separate from each other. Upon glycerin agar colonies are formed, twenty-four hours after inoculation, visible under the microscope as clear water like drops. Older colonies are sometimes colored yellowish-brown in the center. When the Influenza bacillus occurs with certain contaminating organisms, especially the staphylococcus aureus, its growth is particularly luxuriant.

There is perhaps no pathogenic organism more susceptible to desiccation. Drying for twenty-four hours kills pure cultures diluted with water. In sputum the bacilli retain their vitality from twelve to forty-eight hours, according to the completeness of drying. When the sputum is kept moist overgrowth of other bacteria makes finding of the Influenza bacillus extremely difficult, indeed often impossible. It is probable that they retain their vitality for one or two weeks. Chemical disinfectants readily kill them, and they succumb to boiling within one minute, and to 60° C within ten minutes.

In microscopic examination to discover the Pfeiffer's bacillus, the mucopurulent plugs coughed up from the bronchial tubes should be taken rather than throat scrapings. Considerable information can be obtained from direct microscopic examination of smears. Often the presence of other Influenza-like bacilli in the throat secretions places the diagnosis in doubt and resort must be made to plate cultures, using fresh nutrient agar smeared with rabbit's or pigeon's blood.

Some interesting experiments have been made upon animals, but only in monkeys has a disease at all like Influenza been produced. Rabbits have been injected with a twenty-four blood agar culture suspended in I C C of bouillon and certain characteristic pathogenic effects produced. Pfeiffer attributes these to toxins present in the cultures, and in none of his experiments was he able to obtain effects resembling septicaemic infection. From this and similar results obtained by others we are able to settle the question of transmission of epidemic human Influenza to the lower animals. While inoculations have produced some characteristic symptoms, in none of the experiments did the bacilli multiply and we must say that human Influenza does not attack animals.

The pyogenic action of Influenza bacilli will probably be discussed in the article dealing with "Complications," and I need to but mention it here.

During the past year Davis of Chicago has made quite an exhaustive study of the bacteria of the respiratory tract with especial reference to the Influenza bacillus (*Jour. A. M. A.*, May II, 1907).

In 68 cases of Whooping-cough Influenza bacilli were isolated sixty-one times. Usually they were found in the first examination, this being true in 48 cases. In 2 cases the organisms were found several days before the whoop occurred. In some cases the bacilli were extremely numerous, occurring in the plates in almost pure culture.

In 23 cases of measles examined, during the stage of eruption, they had, as a rule, the cough frequently present early in this disease. In '13 of these cases Influenza bacilli were isolated; in 4 they were predominating organism, being found in almost pure culture in the washed sputum. Eleven cases of varicella in young children were examined in the various stages of the discase. Most of these cases had a slight cough. Influenza-like organisms were isolated in 7 of the 11 cases.

Influenza bacilli were found in 5 out of 12 cases of bronchitis in adults. In 17 typical clinical cases of Influenza the Influenza bacilli were found in but 3 cases, while in 20 normal throats the bacilli were present in 2. If we hold with Wassermann (Ueber differentielle Diagnostik von entzundlichen Lungenaffectonen. Deutsche med. Wocheuschr. xivii, 1893) that, "When Influenza bacilli are found, Influenza is present," then these two cases had Influenza. (Influenza-Beobachtungen Kretz Jahre, 1897. Wiener klin. Wochenschr., xl, 1897) states that bacilli are found long after all signs of disease have disappeared. Also that healthy individuals may be carriers of Influenza, at least subsequent to an acute attack. He was able to demonstrate Influenza bacilli in absolutely healthy individuals. (Zur Aetiologie und Diagnose der Influenza. Deutsche med. Wocheuschr., xxlv. 1894) and Neisser (quoted from Beck: Influenza in Labarsch-Ostertag's Ergebnissen der allg. Aetiologie der. Menschen und Thierkraukheiten. Wiesbaden, Bergmann, 1896) have published cases in which Influenza bacilli could be found in the sputum or at autopsy, without the presence intra vitam of signs of Influenza.

In New York, Williams' ("Pathogenic Micro-Organisms including Bacteria and Trotozoa," Park, 1905) examination of sputum in cases of pulmonary tuberculosis shows an abundance of Influenza bacilli present in a large proportion of cases. This not only in winter, but also in summer when no Influenza was known to be present in New York.

Lord, of Boston ("Pathogenic Micro-Organisms including Bacteria and Trotozoa," Park, 1905), demonstrated Influenza bacilli in about 30 per cent of 100 unselected cases of acute and chronic bronchitis. Yet during this period there was no epidemic of Influenza in the city. Cases like these and instances where bacilli have been demonstrated in healthy individuals probably gives substance for Rosenthal's (Recherches sur quelques cas de Broncho-Pneumonie aigue. These de Paris, Steinheil, 1900) belief that Influenza bacilli are simple saprophytic organisms present in the lungs of persons having Influenza.

We do not believe his views are tenable, for why not class diphtheria or tubercle bacilli among the saprophytes, as they are often found in the throats of healthy individuals.

We have quoted at some length the work of Davis of Chicago, not with the idea of unreserved approval or excepting all his findings, but rather to illustrate the difficulties that beset the bacteriologist or general practitioner in attempting a laboratory diagnosis of Influenza. Some of his findings, those in whooping-cough especially, might have been differentiated from true Influenza bacilli, had he applied the agglutination test. The pseudlinfluenza bacillus of Zur Nedden and Muller's so called Influenza bacillus of Conjunctivitis not only closely resembles the true Influenza bacillus, but like it require a nutrient media containing haemoglobin for their growth. The utmost exactness is required if we are to say the Influenza bacilli are, or are not, present in obscure cases.

Much of the etiology of La Grippe or Influenza has been settled when we accept Pfeiffer's discoveries in 1892. Many obscure and inexplicable things have been cleared up. As the bacillus is quickly killed by drying the disease cannot be transmitted to great distances through the air. How then account for the extremely rapid spread of the disease?

Duckworth ("A Note on a Possible Source of Influenza," *The Practitioner*, London, January, 1907) thinks that imperfectly ventilated rooms in hotels and elsewhere, and sleeping berths on trains may be sources of Influenza. We believe that his view is well taken, for though the spread of Influenza is extremely rapid, it is not more so than modern means of transportation.

From Vienna (Vienna Letter, Jour. A. M. A., March 30, 1907), March 10, 1907, we are informed that unstable weather conditions throughout central parts of Europe have had a very deleterious effect upon the general health of the population. Also that the tract of the disease, Influenza, is shown on the map to be exactly in accordance with the main directions of the cyclonic and barometric tracings. By this we are not to infer that the disease is windborne, but rather that those untoward weather conditions recorded, by depressing the resistance especially of the respiratory mucus membranes make the inhabitants apt subjects for infection.

In closing, there are some points that seem worthy of special notice.

- I. While we recognize the function of Pfeiffer's bacillus in causing Influenza, the unexplained presence and pathogenicity of this organism in other diseases demands further study.
- 2. The manifold difficulties of a laboratory diagnosis in obscure cases should lead us to cultivate greater skill in clinical examinations.
- 3. The finding of many investigators would indicate that many consumptives and those with bronchial trouble carry about with them Influenza bacilli, and and that many healthy persons as well harbor a few. Given proper climatic conditions, we have at all times the seed to start an epidemic.
- 4. We must make careful study of the great pandemics to discover why, with the recognized presence of Influenza bacilli always with us, the great epidemics all appear to start in the Far East.

INFLUENZA—ITS COMPLICATIONS AND SEQUELAE.*

BY A. TYROLER, M.D., INSTRUCTOR IN PHYSICAL DIAGNOSIS, COLLEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CAL.

There is probably no disease, so liable to serious complications and sequellae as the grip. While any portion of the system may be influenced by the disease, the more common disorders have been classified by Conklin, from whose excellent article I have abstracted much of this paper, into two groups. First, those due directly to the lesions of the mucous membranes and parenchymatous tissues; and second, the sensory-motor derangements due to the action of the grip toxin on the nervous system. Among the rarer forms belonging to the first group we find ulceration of the vocal cords, abscess of the larvnx, oedema of the glottis, and paralysis of the throat muscles. Otitis media is quite common, and while not as a rule proceeding to suppuration, is usually quite rebellious to treatment, and often ends in mastoiditis. In fact, influenza is one of the most frequent causes of mastoid disease, requiring operation.

The effects of influenza on the gastrointestinal tract, are manifested by nausea, vomiting and diarrhoea, which are usually quite amenable to ordinary treatment, though gastric disturbance is not unusually found to persist for a time after the subsidence of the disease, which it complicates.

Bronchitis and pneumonia are the most frequent and fatal complications. Authors have tried to show a peculiarity in nature and symptomatology of these diseases when associated with the grip. According to Elliott "the grip lung has a long and varying condition of passive blood stasis, unaccompanied by rales. If resolution occurs within three or four days it is accompanied by large mucous rales, and no time is given for the slow appearance of bronchial breathing or bronchophony; but during the long continuance of the blood stasis an

exudation occurs, increasing slowly, which will give in time some bronchophony and bronchial breathing, but never so complete as in pneumonia. Resolution never appears in these cases with the suddenness that characterizes it in pneumonia. The condition passes off as gradually as it is formed. The sharp, clear cut and sudden phases of the pneumonia attack separate it clearly from the obscure, irregular and slow phases of the grip lung."

DaCosta describes the grip lung as one "in which intense congestion occurs with patches of collapse, and with spots of localized consolidation here and there, if consolidation happen at all. Yet there are instances in which real croupous pneumonia takes place, involving considerable portions of the lungs."

Osler admits that cases of pneumonia complicating the grip, sometime run an atypical and obscure course, but these cases are exceptional, and all the anomalies mentioned as peculiar to influenza, are found in many large series of uncomplicating pneumonia. It is important to bear in mind, that lung complications are liable to creep on insidiously, and that the chest should be carefully examined in the presence of anomalous symptoms, whether referred to the respiratory tract or not.

Pleurisy and empyema are occasionally found, the pleurisy being especially liable to take on the suppurative form. Abscess of the lung has been noted. That influenza bears an etiological relation to phthisis pulmonalis can no longer be doubted. It is a matter of common observation that consumptives fare badly under the epidemic influence.

Thrombosis-venous and arterial, is present both as a complication and as a sequel. Leyden and Guttmann have

^{*}Read before the Los Angeles County Medical Association, February 7, 1908

collected 28 cases of phlogmasia alba dolens.

The nervous disturbances which occur during and after grip are important, this disease being a powerful causative factor of protean forms of nerve disease. which may be enumerated in the order of their frequency as neuritis, meningitis, myelitis, and cerebritis. Multiple neuritis is less common than the local forms, especially the supra-orbital, intercostal, and sciatic varieties. But isolated neuritis of every cranial nerve has been recorded, with such resulting conditions as optic atrophy, loss of smell and taste, ophthalmoplegias, motor, facial bulbar, and pseudo-bulbar palsies of various types. including true pneumogastric paralysis. meningitis, and cerebro-spinal meningitis are the commonest types of meningeal inflammations.

Bristow has reported two cases of cerebral abscess, and has seen others in which the symptoms would justify such a diagnosis.

Convulsions have been repeatedly observed, and in a few instances the epileptic habit has been established. Mills has seen two such cases.

Anterior polio myelitis is the form of cord disease most frequently associated with influenza. Temporary paralysis of one or more limbs, evidently of spinal origin is occasionally seen. Abolition of the patellar reflex has been noted. Neuralgic attacks, severe, persistent and involving any of the nerve trunks are perhaps the commonest of the postinfluenzal neuroses. The rekindling of old and fading neuralgias during convalescence is a feature of the disease. Neurasthenia—cerebral and spinal. hysteria and hystero-epilepsy were frequent seguels in the late epidemics. Insanity is often encountered, usually taking the form of melancholia. Influenza may act as an exciting or a predisposing cause, but there is always an antecedent acquired or inherited predisposition. The insane are less disposed to contract grip than the sane, and its occurrence is sometimes attended by a remission in the mental symptoms.

Biermer, Gottschalk and others have reported the frequent occurrence of severe hemorrhagic endometritis. The uterus is enlarged and sensitive and the hemorrhage profuse. It has long been known that women sick with the grip were subject to profuse and painful menstruation, and on the other hand that the menses were apt to return to those suffering from amenorrhoea. Pregnant women are liable to abort under the same conditions.

It is therefore all-important to bear in mind the tendency of influenza to develop latent into active disease—especially in lesions of the heart, lungs and kidneys. Under the baleful influence of a grip infection, a slight albumenuria may be changed into a rapidly fatal nephritis, or a mild cardiac affection may speedily result in degeneration of the muscular walls of the heart, with dilatation of its cavities, or a slumbering tuberculosis may be awakened into fatal activity.

It is evident from what has been already outlined, that the complications are so numerous, since every organ and tissue may be affected, that their treatment, in so far as special treatment is concerned, is beyond the limits of even an entire evening's consideration. A great many of them cannot be prevented by the greatest care and the best treatment.

Some are due to carelessness, to overexertion, to secondary infections, all of which must be guarded against. Debility, the most common of the sequellae, is frequently extreme, and of great duration. Prophylactic measures, nux vomica, cinchona preparations, iron are all indicated. Above all, adequate feeding; if necessary, overfeeding, should be insisted upon. Physical and psychical rest is of great importance, but care must be taken not to suggest invalidism.

403 Grant Building,

INFLUENZA-ITS PROPHYLAXIS AND TREATMENT.*

BY DAVID D. THORNTON, M.D., LOS ANGELES, CAL.

During the epidemic of La Grippe in '89-90 the disease was looked upon more or less in the light of a joke—a new subject for the funny papers—an opportunity to send bouquets to the lady victims, and play the part of Job's comforters to the members of the sterner sex.

After a time, however, it began to be recognized that La Grippe had a mortality rate; that its complications were many; that recovery from its depressing influences was often a matter of many months; that occurring in the aged and in those already suffering with some chronic disease it became a formidable menace to life.

The reports of the different boards of health at the period of the height of the epidemic all showed a marked increase in the death rate.

The deaths directly attributed to the uncomplicated cases were few. Thus Prof. Pepper reports only 84 deaths in 35,413 uncomplicated cases, a mortality of only one-fourth of 1 per cent. Yet he writes that in Philadelphia "the total mortality for the month of January, 1889, was 1862, and for December, 1889, 1488. In January, 1890, the epidemic of influenza was at its height and the mortality rose at a bound to 3044, of which number only 116 were reported as influenza."

A similar report was noted by Bertillon of Paris, who stated "that while the deaths reported from influenza in Paris in December, 1889, and January, 1890, numbered but 213, the general mortality exceeded the average by 5500.

Such marked increase in the death rate occurring at the height of a single epidemic cannot but be attributed, as Prof. Pepper states, to that particular disease and its complications.

There is a certain class of patients

entrusting themselves to the family physician who deserve especial protection from any acute illness, no matter how simple that disease may be, and especially is this true with the acute infectious diseases.

These are the aged, or those who have passed the 60 year period, and those the subject of some chronic affection.

I am sure it has been the experience of every one present that his chronic nephrities have experienced an acute exacerbation during so trivial an illness as tonsillitis.

Certainly is this true with the chronic cardiac cases during the depressing influences of an attack of La Grippe.

A recent letter from an Eastern city—at that time experiencing an epidemic of La Grippe—stated that my uncle was recovering from influenza, and that my aunt, long a subject of some hepatic disease, had become infected with influenza, soon passed into a state of como and in three or four days died.

These are the cases who during ordinary conditions of health have sufficient functionating tissue to meet the demands of the organism and maintain a state of well being. Yet when an extra demand is put upon the already diseased organ it is unable to meet the added burden and death ensues.

These cases, in my opinion, are those especially to be guarded during an epidemic of influenza.

It is generally recognized that influenza is an epidemic disease—pandemic at times—caused by a definite bacillus infectious in character.

Then the question arises, why should it not be subjected to the same prophylactic measures which we employ to other infectious diseases to prevent its spreading to those uninfected.

^{*}Read before the Los Angeles County Medical Association, February 7, 1908.

Perhaps because the disease is so mild in its manifestations compared with other infectious diseases—that sunshine and fresh air have such a destructive influence on the bacilli—the rigid quarantine measures enacted against some of the other more dangerous infectious diseases are not necessary in our influenza patients.

However, prudence would suggest that in this infectious disease the uninfected members of the family be excluded from contact with the patient. That the nurse or member of the family caring for the patient should absent herself from the rest of the family. That abundance of fresh air and sunshine be admitted to the sick chamber.

That in those cases in which the nasal or respiratory organs are involved the discharges should be thoroughly disinfected; that all cloths used should be destroyed by heat. That all coverings coming in direct contact with the patient, such as pillow cases, sheets, bed clothes, night gowns, should all be subject to boiling.

And I would especially mention those members of the family past the meridian of life, those the subject of some chronic disease, be especially guarded, perhaps for their safety it would be well to advise their removal to a hotel or the household of a friend or relative where the disease had not made its appearance.

For some reason infants seem in a large degree immune to the infection of influenza, and when the disease attacks a nursing mother I would advise a continuance of the breast feeding rather than jeopardize a failure of the milk supply by taking the infant off the breast and substituting an artificial food.

A week or ten days seems sufficient to isolate an influenza patient from the other members of the family and flooding the sick room with sunshine and fresh air the chief necessary measures for room disinfection. As to Treatment: During the height of the epidemic of '89-90, I recollect that the papers of the middle west city in which I was living contained large advertisements from enterprising drug houses extolling the specific virtues of quinine and assafoetida for La Grippe. Quinine capsules and assafoetida pills were consumed by the thousands.

Because assafoetida was considered a good remedy to take internally the more fearful looked upon its external use as a sure prophylactic measure. Small sachet bags were filled with the crude drug and worn about the neck. Possibly the populace believed La Grippe to be a visitation of the devil and feeling confident that such a stinking drug as assafoetida could not but have the blessing of His Satanic Majesty—did homage to him by wearing about their necks his favorite medicine.

Later a doctor, seeking palmiage, announced to the papers that arsenic pills of his own manufacture never failed both to protect and cure any case of La Grippe. So Dr. So-and-So's arsenic pills were added to the quinine capsules and assafoetida pills.

Today we recognize no specific for La Grippe.

Many of us look forward to the time when most of the infectious diseases will be treated with serums, but that day appears far in the future.

For the average mild case very little medicine is required. The patient is removed to a sunny, well-ventilated room, given a warm bath and put to bed and kept there until the temperature has become normal and convalescence well under way.

The intestinal tract is cleared with the usual small dose of calomel, followed by a gentle saline. Foods of an easily digested and nourishing form are ordered, such as bouillon soups, slightly diluted milk, crackers, toast, soft eggs, and as relishes jellies and fruit juices. Plenty of water should be allowed. If the nasal passages are involved, nasal douches, alkaline, non-irritating, cleansing solutions, such as well diluted Glycothymoline, Dobell's or Seiler's, should be employed.

For the conjunctivitis—cleansing antiseptic solutions such as boric acid solution.

For the aching and general discomfort—massage and the hot-water bottle afford considerable relief. Tepid sponging and alcohol rubs both increase the comfort of the patient and reduce the temperature.

For the restlessness and insomnia, 5 or 10 grains of Dover's powder or Sulford or Trional in their usual doses.

In the severe cases in which the headache and discomfort is great, the temperature remains high and the depression not marked, besides the general measures mentioned, the coal tar phenacetine or antipyrine, either alone or combined with salicin, salophene, salol or aspirin will be employed.

These remedies aided, perhaps, with small doses of codine or heroin, will keep the patient fairly comfortable.

In those cases characterized with unusual depression, the coal tar preparations will be used very sparingly, if at all, and stimulation begun early.

Quinine has many advocates and is used in nearly all cases by many practitioners who claim that it is as much a specific in influenza as it is in malarial fever.

During convalescence the easily assimilated preparations of iron are of much value and the addition of small doses of arsenic are frequently helpful.

There are other cases whose convalescence is protracted; with them a change of climate, a removal to the mountains or seashore acts beneficially.

SANITATION.*

BY J. W. COLEMAN, M.D., ARIZONA TERRITORIAL SUPERINTENDENT OF PUBLIC HEALTH.

Some years ago a doctor said he "could not write a scientific paper and we could not understand it if we did." This paper has little or nothing scientific in it, but has rather to do with deductions drawn from scientific investigations made by other men.

I wish to urge physicians to make practical use of the various methods of preventing disease. It is good to cure, but better to prevent disease.

Science has discovered the specific cause of most diseases, and cures for some. This we believe, use and profit by. But science has also told us how to prevent disease and right here is where we fail. Too many of us seem to be satisfied with knowing how to prevent disease but make little or no effort to use that knowledge.

It is this fact that prompts me to

urge all physicians to be sanitary inspectors; to use their knowledge of prophylaxis and to speak in no uncertain terms against unsanitary conditions. Make the Health Officer earn his salary.

We may make a few enemies, but more friends. We may be accused of "butting in," but, gentlemen, in any good cause, it is better to "but in" than not to get "in" at all.

The physician has the confidence of his peoeple. They believe in him and trust him. He is honored and respected by them, so that when he gently points out that certain things are injurious to health, his words carry great weight.

Too many of us, however, stop with the individual and neglect the homes and communities at large. True,

^{*}Read before the Arizona Medical Association, April 27, 1908

through the work of the physicians of the United States, Congress passed a pure food law. The Government also tries to keep out disease, but between the Government on one hand and the individual on the other, there are the homes and smaller cities that receive little or no protection. These are the ones that I think we are neglecting.

A little time spent while making a professional call, in carefully examining into the sanitary conditions of the house and backyards, and then explaining to the family the danger of unsanitary conditions found, will do a great work that is now neglected.

We may find some or all of the following conditions: Drawn blinds to keep the sun from fading the carpet; closed windows to prevent a draft; a baby creeping on a dirty floor; leaky sinks; toilet that fails to flush; sewer gas bubbling back from sewer or cesspool; layer upon layer of wall paper, the old dirty paper never being taken off; in the back yard all kinds of rubbish from horse manure to tin cans; old unfilled closet holes; open closets; dirty water and garbage from the kitchen all teeming with flies, with house unprotected by screens against them.

Howdard says that the common house fly causes more deaths than war.
But why mention more unsanitary

But why mention more unsanitary conditions! We all know them and should urge our people to correct them.

These conditions can not be corrected by law. No law is effective unless backed by the peeople, and at present they do not know, neither do they understand the necessity of sanitary rules. Again, this seems to be the land of "manana." Climatic conditions steal the energy, and cleaning up is put off until tomorrow.

The medical societies can do a good work by holding open meetings and inviting the public to discuss sanitary problems. It will not be long until the people will demand laws to protect health as they now do to protect property. Teach them that man's greatest asset is health. Rob him of this and you make him poor indeed.

Thousands of dollars are spent to protect the health of horses and cattle, sheep and hogs, but how little to protect our children! Many children and sick adults drink milk, but we don't know whether they are drinking an ideal food or an emulsion of bacteria. The milk supply of some cities contains more bacteria to the c.c. than their sewage. Have we any reason to think that milk in Arizona contains less?

We are careful to regulate the baby's diet; everything is measured and properly diluted to suit the age of the child, then we wonder why the food does not agree with it. The milk may cantain millions of bacteria to the drop. They may not be pathogenic, but certainly change the food qualities.

In Germany, according to Behring, of every 1000 children born alive 235 succumb during the first year's life. Only 510 out of 1000 males born, attain manhood. Not more than one-third of those reaching maturity are found to be fit for military service.

These sad facts Behring attributes very largely to the ulterior effects of infection derived in infancy from milk.

Infant mortality in bottle fed babies is ten times as great as in breast fed. I believe dirty milk is the principal cause.

The wonder is, not that so many die but that any of them should survive.

Unnatural unsanitary clothing from birth to death, from head to foot; feeding on food teeming with bacteria; living in unsanitary houses; violating every law of health and inviting disease by various forms of dissipation!

Health is sacrificed for fashion, comfort for style, and long life for a few years of social madness. Is it any wonder that man dies young and old age is a rarety?

Teach peeople how to live and not so many of them will prematurely die.

DISCUSSION.

DR. SOUTHWORTH:—We should while making calls look around to see if things can not be done to better sanitary conditions. A few years ago in Prescott I had occasion to look out of a back door and noticed the conditions which lead me to ask the people if the house had not been connected with the sewer. They informed me that it had not been and that they had repeatedly offered to put in the plumbing and pay it in rent but they were turned down on the proposition. I went to the Health Officer of our town and spoke to him about the condition and asked if he could not do something about it. The next morning the people were arrested.

There are hundreds of thousands of dollars that are spent for sheep and cattle, to making fine cattle, but little is spent for humanity. It is a fact that our Government spends hundreds of thousands of dollars a year to prevent tuberculosis among cattle; and the thousands of dollars that the Government is putting up for a dam at Tonto; some of these doctors might make a few dollars in selling real estate, but how much better to ask the Government to appropriate money for the improvement of sanitary conditions.

DR. MacGOWAN:—I had a long experience in the city of Los Angeles as Health Officer, and with this experience covering some eight years, and as a member of the Board of Health, I know how extremely difficult it is for County, City or State Health Officers to enforce the law. A Health Officer sometimes appears to be derelict in his duties, when he is really doing the best possible, under the circumstances.

DIPHTHERIA ANTITOXIN—UNTOWARD EFFECTS AND CASE REPORTS.*

BY F. W. THOMAS, M.D., CLAREMONT, CAL.

On the evening of December 15, 1907, I was asked to see a boy 15 years of age, who had always been healthy until the past few days. He had continued his work, that of driving a team while cultivating an orange grove, until the day previous, when he gave up and went to bed.

Upon entering his room I immediately detected the peculiar foul odor so characteristic in most cases of diphtheria. The boy's face was flushed, his pulse was rapid-120 per minute-and his respirations labored. He breathed with open mouth, indicating nasal obstruction. Examination of the throat revealed the presence of a large mass of false diphtheretic membrane, which filled the pharyngeal space and extended up to the post-nasal cavity. I immediately sent for anti-toxin and gave the necessary instructions concerning quarantine, disinfectants, etc. When the anti-toxin arrived I sterilized the location under the right scapula and injected in the usual manner a dose of 4000 units, labeled "good until March 15, 1908."

There was a change at once in the boy's countenance. A look of intense anxiety came over him, and the lips. face and neck became livid in appearance. He gasped for breath, cried out that he was smothering and that his heart was hurting him. Froth poured out of his mouth in profusion, while he clutched at his throat and chest with his fingers. There was a peculiar deathlike stare in his eyes, the pupils became widely dilated, and he immediately passed into convulsions, throwing himself from one side of the bed to the other. Finally his breath seemed to leave him and he dropped back on the bed in a complete state of collapse and unconsciousness, while the radial pulse entirely disappeared from both wrists.

With such rapid and thorough demoralization of vital forces, death certainly seemed imminent. Restorative measures were promptly instituted. Strychnin I-20 gr. and stropin I-100 gr. were administered hypodermically, heat applied to the extremities, and hot coffee injected into the bowel. So sudden and

^{*} Read before the Los Angeles County Medical Association, May 15, 1908.

unexpected a prostration, accompanied by convulsions, was indeed both alarming and puzzling. Whether it was due to the injection of the anti-toxin, or to the overwhelming toxæmia of the disease, was difficult to decide. I was inclined to think that both forces entered into the cause. I was reminded also that sudden cardiac failure was very rare in the *beginning* of an attack of diphtheria, and would not be accompanied with convulsions.

In the latter stages of this disease, and during convalescense, after even slight exertion paralysis of the heart is by no means uncommon. Believing that both of the above-named factors were in a measure responsible, I sent for more anti-toxin and repeated the hypodermic dose of strychnine, supplementing it with the 1-50 gr. of nitro-glycerin. At this stage Dr. Garcelon was sent for as consultant physician. He arrived about three-quarters of an hour later, and after watching the symptoms together for a time, and no improvement noticeable, we decided to risk another dose of antitoxin. The filling up of the throat with the false membrane told plainly that the system was profoundly saturated with the toxins and that nothing but heroic measures could save the boy from that danger. The anti-toxin was certainly needed, and at 9:30 p. m., an hour and a half after the first injection, 3000 units were administered; point of selection, sub-mammary region. At the same time another dose of 1-30 gr. of strychnin was given hypodermically, which was followed a little later by 15 drops of the tincture of digitalis, administered hypodermically. Hot injections into the bowel were frequently given. One preparation of coffee was thrown into the bowel hurriedly by an attendant when the water was inadvertently too hot. The excessive heat caused the patient to squirm and immediately expel the fluid. This was the first sign of movement on the part of the patient for more than an hour, and it gave some encouragement for resuscitation. The revival, however, was but momentary, as he at once dropped back into the comatose state. The feet and hands became cold and blue, the respirations were feeble and irregular, while there was still an entire absence of a radial pulse. The case seemed utterly hopeless, and the parents were so informed. But we continued our efforts.

At 10:30 p.m. another dose of antitoxin was given-2000 units in strength -accompanied by another hypodermic of strychnin 1-30 gr. and atropine 1-100 gr. At II:30 one ounce of hot saturated camphorated oil was injected into the bowel, and retained, and by midnight the respirations were more regular and of better quality. At I a.m. another dose of strychnia 1-30 gr. was given, and soon after this the patient showed signs of returning consciousness and was able to take a small quantity of whisky and water by the mouth. One hour later a faint radial pulse could be detected, the first perceptible in six hours' time. Whisky was given by the mouth more freely and at frequent intervals, and by 6 a.m. indications of substantial improvement were apparent. At 9 a.m. 3000 units of anti-toxin were given without any bad effect. The throat and nose were sprayed at frequent intervals with fullstrength peroxide of hydrogen. Calomel in one-grain doses was given every half hour until free catharsis was produced. At 1:30 p.m. (on the 16th) 3000 units of anti-toxin were given, and the same-sized dose repeated at 5:30 p.m. the same day, making in all 18,000 units in six doses that were administered in twenty-two hours.

No more anti-toxin was given after this, and during the second day the symptoms were all improving; the pulse at the end of forty-eight hours had dropped from 120 and 140 to 100 per minute, while the respirations were reduced in frequency from 50 and 60 to 25 and 30 per minute. Whisky was given every two hours, accompanied by

estrychnia and nitro-glycerin at intervals of three and four hours.

By the fourth day the false membrane began to slough, one large mass almost strangling the patient in his efforts to expel it from his throat. After its removal he could breathe with his mouth closed for the first time since he had taken his bed.

On the eighth day the patient complained bitterly of muscular and articular pains, especially about the knee joints. An erythematous eruption, accompanied by intense itching, appeared over the whole body, and the eyes became quite bloodshot. The general eruption lasted for three days, while that over the abdominal region, where four of the injections of anti-toxin were given, was much more severe and was troublesome for more than a week longer.

After the extremely hot coffee had been injected during the period of collapse, the patient complained frequently of a hot, painful sensation in his bowels. On the ninth day a strip of mucus membrane as large as an adult finger and six inches in length passed the bowel during an act of defication. It was dark gray in color and had the typical odor of diphtheretic membrane, showing that infection had passed down into the intestinal canal and found lodgment at a point where the mucus membrane had been irritated by the hot injection. The effect of this membrane passing out of the bowel was similar to the clearing of the throat of the false membrane, the patient feeling much relieved and improved, although still very weak.

Stimulants in the form of strychnia, nitro-glycerin and whisky, together with nutrient enemas, were continued regularly for two weeks, at which time the patient was safely convalescing; but absolute rest was enjoined for three more weeks, and the strychnia in 1-50-gr. doses was continued regularly during this period at four-hour intervals, and

at six-hour intervals for three weeks longer.

The appetite gradually returned and the patient eventually made a satisfactory recovery, but owing to the severe strain, convalescense was somewhat protracted. No sequela of albuminaria, or paralysis.

The history of this case has been given somewhat at length because of the special points of interest involved, the most important one of which was the sudden collapse following the injection of the first dose of anti-toxin. Why such a result should have followed is not easily understood. We simply do not know at the present time. The books tell us that the possible sequela are fever, pruritis, rashes, muscular and articular pains, giddiness, convulsions, collapse, and occasionally death. Fatal results are rare and occur only when the individual's constitution is somewhat at fault, as in status lymphaticus, enlarged thymus, or an asthmatic tendency. The unfortunate part of it is that warning symptoms are not always clearly marked in advance.

Several untoward results in the use of anti-toxin, some fatal, have been reported in the journals in this country in the past six months, which will have the effect of putting the profession on guard. There is an unknown quantity that has to be met in this connection that has an element of uncertainty about it. I understand that the subject has attracted the attention of the Federal authorities through the Marine Hospital Service, and efforts will be made to ascertain if possible the cause of these unfavorable results that have recently been reported.

In some respects the conditions are similar to those attendant upon the administration of an anesthetic for a surgical operation. Anesthetics are given every day, and yet we all know that the process is not entirely free from danger. We simply use all reasonable precautions and take the risk. And so

with the use of anti-toxin, recognized the world over as the best antidote for diphtheretic poison, we use the recognized precautions and act upon the principle that there are no known contraindications to its use which may not as a rule be overridden by the necessity for its administration.

In the January number of the Journal of the American Medical Association, Dr. Wyley of Norristown, Pa., reported a case where death occurred in five minutes' time after an unminimizing dose of 1000 units had been injected into a man 34 years of age, who at the time was apparently in the best of health. Death took place in the doctor's office where the man had gone for the dose, he having kissed his child two hours previous, while she was suffering from an attack of diphtheria.

In the February number of the same journal, Dr. Boone of New Martinsville, W. Va., reported a case where a fatal result followed the injection of 4000 units of anti-toxin in a boy 10 years of age who was suffering from an attack of diphtheria. Death occurred in this instance in five minutes, after seven convulsions, although the boy's condition had not been considered serious before the serum was administered. The symptoms described in these two cases were quite similar to those presented in the case I have just reported. In none of them was there any contra-indication for the use of anti-toxin, so far as was known. The disaster came suddenly and without warning, and was unexpected.

It was singular, in the case I report, that the *first* injection of anti-toxin should have such an untoward effect, while the subsequent doses were not followed by unfavorable symptoms. It is true that strychnia was given with all of the doses except the first, and that the patient was unconscious when the second and third injections were given. I am fully convinced that the boy would not have survived but for a few hours

at best, if it had not been for the constant and vigorous stimulation that was given him. The important indications were, that there was fully as great danger, if not more, of death from cardiac failure, as from diphtheretic toxæmia; to meet these conditions, prompt stimulation to sustain the heart and nerve centers was imperative, while the antitoxin was needed to arrest the deadly toxins of the disease. One feature was as grave as the other, and an effort was made to meet both. Whatever theory may be applied to the case, the important thing is that the patient recovered, under most adverse circumstances.

This case is not reported for the purpose of discouraging anyone from the use of anti-toxin in the treatment of diphtheria, but for the purpose of bringing the facts before the society just as they were presented to us in a sudden and unexpected manner, and as they may come to any practitioner in his daily professional rounds.

There is a lesson to be learned here. Others may unexpectedly find themselves confronted with the same problem. Reflection beforehand may prove helpful in a sudden predicament, and the experience herewith detailed is given for what it is worth along with the other cases recently reported.

One point that I feel was well demonstrated in this case, and that is the value of thorough stimulation in such an emergency. Among the drugs recommended for this purpose, strychnia stands at the head of the list, in my opinion.

Another point is, that while the untoward effects of the serum in certain cases naturally makes one more cautious, it need not deter us from using anti-toxin when needed. I have given it no less than twenty-five times since the unfortunate experience five months ago, and only with good results.

And lastly, I would say that it is not a wise thing for the medical attendant to make the unqualified statement to the parents or the patient that there is no possible harm to come from the injection of anti-toxin. It might prove otherwise. We trust that the investigations instituted by the government will result in the elimination of the danger element.

STERILIZATION OF AIR OF ROOMS.*

BY S. BERNHEIM, M.D., PARIS, FRANCE.

The importance of the composition of air for animal life need not be proved since Pasteur's. Strauss', Laveran's and Miguel's researches on the microbes contained in the atmosphere. In one day 10,000 litres of air pass through an ordinary man's lungs, that is to say more than 400 litres per hour.

Modifications in the composition of atmospheric air are the cause of great disturbances in the organism and sometimes lead to death. These modifications differ whether one examines air in the country or in large towns. While country air hardly contains from 200 to 300 germs per cubic meter of air, the city atmosphere, especially that of thickly populated centers, may contain as many as 41,000.

My opinion is that all these figurative elements, those living corpuscles, constitute the principal pathogenical agent of transmissible microbian diseases. This first prophylactic consideration might have urged us before now to seek for means of sterilizing the air we breathe. But other imperious reasons exist both in medicine and in surgery. In hospital wards, in attending surgery or accouchement cases, the air saturated with micro-organisms is a constant danger for the patients and for those who have undergone an operation or given birth to a child.

Very often the most competent practitioners have observed in spite of the most rigorous precautions, cases of infection of exterior origin. After a perfect "asepsis" one may reasonably suppose that the contagion is due to an aerial origin. However this may be,

the writer thought it would be very interesting to attempt to sterilize air charged to the utmost with bacteria even if fully contaminated with a fine flora of microbes.

To attain our end we used the simplest apparatus possible.

I. A rectangular box containing a vat made of metal, having good conducting properties which is submitted to the action of a source of heat (gas or coal chimney). The said vat contains filtering matter (amianthus or filings).

2. A saturator placed at the top of the vat and only containing plain or medicinal water, the saturator preventing the unpleasant dryness of the atmosphere.

The inner sides of the box and vat are bored at their lower part by an opening on each side (exhausters) and at the top, at the level of the saturator by two other openings by which the air escapes after having passed through the filter at a temperature of 180°. This high temperature is controlled by a thermometer placed immediately above the filter made of filings. In order to avoid the scum which inevitably arises from the dust a movable basket is placed underneath the filter and into which all the sterilized dust falls. The dimensions of the apparatus vary according to the importance of the room. When the room is small an alcohol lamp is sufficient to start the apparatus working and to bring it up to the temperature which the sterilization of air requires. When a larger room is to be sterilized and when one wants to arrive

^{*}Written for the Southern California Practitioner.

at a more complete sterilization the apparatus requires a more active and lasting fire.

At any rate, the exhausting action of the apparatus is very powerful, for the maximum of dust and germs may be ascertained half an hour after the operation begins.

For the last two years we have been trying a large number of experiments and we are now only relating those which have been carried out with all the care that such researches deserve.

Very often, indeed, unskillful assistants, after having entered the room fixed on during an experiment have introduced a new atmosphere more or less charged with microbes. In order that the demonstrations may be of value we must previously test the air of the room which is being experimented on in a certain way, at different points and heights without giving a means of escape. By reason of natural orifices a house is never absolutely and completely permeable and that is the reason why it is difficult and nearly impossible to completely sterilize the air in a room. However, we have twice obtained this ideal result. Moreover, here is the report of the experiments just as they worked out.

We gathered the dust in the air and we scattered it according to Miguel's process. In most of the experiments an assistant stayed in the room in order to fan the air and cast the dust into a vacuum. It is true that that experimental measure is really useless because in the natural circulus of the air, dusts are generally gathered and kept up in the atmosphere, the movement being helped by heat. In one experiment we started with 10,000 bacteria to a cubic metre and two and a half hours after we began the experiment the air only contained 1660 bacteria. In another experiment where the air was polluted we started with 91,000 germs and after an hour we found only 15,000 germs. In another experiment we started with 47,-

800 germs and after one hour and a quarter it was reduced to 2500.

Here is another experiment, the air of which having been polluted. When we began the air contained 275,000 germs and after an hour only 32,000.

In another experiment in which the air contained at the beginning 82,500 germs and after two hours we found only 22,800.

Here is another experiment. We started with 47,000 germs and finished with 0. No settlement was developed on the gelatine. But as a matter of fact this result can only be obtained and hoped for in very exceptional cases.

In addition to this we could relate a great many other experiments which resemble the preceding ones, that is to say we have always obtained a considerable decrease of bacteria and mouldiness.

Considerations: It is indeed very easy to renew and check our experiments. For our apparatus is so plain that anybody is able to construct one exactly similar, and fix it to any chimney which draws well. An examination will show a heavy deposit of dust on the gridiron and on the filter of filings. As this matter rises to a high temperature the germs that travel over it die without fail. And indeed, in all those experiments we obtained an exact result. After two hours of combustion we have considerably reduced the number of bacteria, namely to 16 or 17 times less numerous after the experiment is terminated. With a fire which lasts longer we shall be able to reduce the number of germs to a strict minimum and possibly nearly to zero.

The importance of these results will be understood by all hygienists, surgeons and accoucheurs. We know that air is not at all or very little harmful in regard to its chemical alteration, but only according to the germs it contains. If we can hope to sterilize with a simple apparatus the air of a dwelling

house, accidentally or continually overcrowded, this is an important hygienic progress for preserving health.

We sterilize milk, we pay attention to the quantity of alimental commodities, especially meat; we boil water to avoid typhoid fever, why shouldn't we purify the air of apartments and habitations? This "aero-sterilization" is especially designed for hospital wards, schools, colleges, barracks, where the air is so harmful. It will be of great use for all diseases of windpipes where pure air, the important food of the lungs, plays so important a part. Give good food to a consumptive patient with absolute rest in a vitiated atmosphere and disease will continue its grave course; put this same consumptive person in an atmosphere free from bacteria with the same rest and the same nourishment and you will bring him to a better state of health and to a cure. It is just the same for those suffering from pneumonia, bronchitis and emphysemia.

Here is therefore a first list of directions for the aero-sterilization.

But what is one to say of the operating or accouchement rooms where the chief operators take such precautions to avoid all infection from outside? We are convinced that all these operators would be glad to strengthen their chances of success by sterilizing beforehand and during the operation the air in their rooms. This new aseptic guarantee is so important that we need not further insist on it.

FUNCTIONAL ILEUS—CASE REPORT.*

BY REXWALD BROWN, M.D., SANTA BARBARA, CAL.

I recently lost a case presenting the following features: On April 4th I did a posterior gastro-jejunostomy-no loop -with the Murphy button to relieve a blockage at the pylorus, carcinomatous in nature. The patient, a lady, at the time was markedly asthenic and illy nourished, having been bedridden a month, with more or less persistent vomiting of the coffee ground type. What little food she secured came through rectal feeding. To the nutritives, laudanum had been added to deaden the severe pain which freighted the suffering.

The patient rallied well from the operative procedures aided by repeated salines, slowly given by bowel. Vomiting, which had been so constant previous to the surgical measures, continued quite uninterruptedly for three days, after which it entirely ceased and patient began to take and relish liquid diet, showing conclusively that drainage from stomach had been attained. In the

next few days flatulence was considerably distressing, requiring use of rectal tube. Bowel movements occurred with assistance of enemas daily.

Despite this progress the clinical picture lacked good tone—a commensurate amount of strength did not develop, and an exhaustion of vital forces appeared on the fourth day—a slight haziness of mind with delusions, repeated again for a longer interval two days later. On April 14th, ten days after operation the attending nurse noted on chart "mind wandering badly." No true rational moments appeared from this time until her death nine days later on the 23rd—patient had constant ramblings, mutterings and delusions.

The condition, insanity, post operative we may call it, appears to me to have been indicative of the approaching dissolution. Clear cerebration failed because of insufficient good red blood being present to nourish the brain cells. The blood impoverishment was due to

^{*}Read before the Santa Barbara County Medical Society, May 11th, 165

the exhaustion inherently produced by carcinoma, the inability for food to pass into the intestines, and the vomiting of blood. The operation could have been a factor in the result only by adding shock to an already badly damaged system.

The patient died of asthenia. It is the purpose of this paper to call attention to the feature of peristaltic arrest which occurred in this case, and its relationship to the syndrome ileus. Early April 16th, twelve days after operation. patient had a fair evacuation. On April 17th, there was no movement. An enema, salts, glycerine and water was given April 18th, in morning, followed by normal salt solution—patient retained both. In afternoon patient was placed on commode with no resultsthat night calomel and salts were given by mouth-morning of April 19th another enema was given, a little water only returning after one and one-half hours. Patient's abdomen was becoming tympanitic-no pain, however, and there was no severe pain at any time up to her passing. During morning of this day, 19th, a small amount of colored water passed while patient was on commode. Following this up to the night of the 22nd, night before she died. when an enema containing one ounce of Epsom Salts, a drachm of turpentine, and four ounces each of molasses and milk brought results, nothing passed the bowels, though eserine was given hypodermically, and calomel in drachm doses every hour, salts, croton oil, two drops and liquid nourishment was given by mouth. Patient was placed on commode often. Enemas were stopped as they were only retained, causing increase of distention. I believe the final enema, through weight of its contents, merely opened an exhausted sphincter, for examination of the rectum afterward showed it ballooned out, the walls not being felt.

Autopsy a few hours after death re-

vealed no kinking in the intestines, no adhesions, a perfect anastamosis between stomach and jejunum, though not as firm as might be expected; button had fallen into stomach; small intestines seemingly normal with solid masses at intervals which could be moved along; carcinoma completely blocking pylorus and adherent to gall bladder, and of especial interest, a complete ballooning of colon from rectum to ileo-caecal valve. Here was the area of arrested peristalsis.

Ileus is a train of symptoms consisting of pain, nausea and vomiting, meteorismus and coprostasis, one or two of the symptoms as a rule of preponderat ing influence. This complexus being present, it follows that faeces cannot move along the intestinal canal, because there is either a mechanical obstruction to their passage, or there is an excessive contraction of the bowel wall, holding the contents in a firm grip, or there is an absence of the power of propulsion, the faeces lying inert in a functionless tube. These three types of ileus are called mechanical, dynamic and advnamic.

Under the mechanical heading, the lumen may be blocked by:

- A. Substances within itself, as
 - I. Gall stones.
 - 2. Enteroliths.
 - 3. Foreign bodies.
 - 4. Faeces.
- B. By pathologic changes in its walls,
 - as
 - 1. Carcinoma.
 - 2. Adenoma.
 - 3. Fibroma.
 - 4. Lipoma.
 - 5. Ulcers.
 - a—tuberculous,
 - b-stercoraceous,
 - c-syphilitic.
 - d-congenital.
 - 6. Intussusception.
 - 7. Volvulus, narrowing the humen in their developments.

C. By pathologic processes altogether outside the bowel, as

- 1. Peritoneal bands.
- 2. Diverticula.
- 3. Tumors of

a-uterus,

b-ovaries.

c-pancreas,

d-mesentery, etc.,

which involve the intestine because of its proximity.

Dynamic ileus is seen typically in the colics of lead and tyro-toxicon poisoning.

Adynamic ileus sometimes follows operations about the testicles, removals of haemorrhoids, paracentesis, and laparotomies to correct various morbid abdominal conditions. Also does it appear at times during renal and biliary colics, in strangulated omentum, in embolism of the mesenteric artery, and during habitual constipation. It is not an uncommon picture in acute general peritonitis-in truth it often curtains the scene in the peritonitis following an unoperated or neglected appendicitis. Too, adynamic ileus may be seen in pneumonia and uraemia, and other acute systemic intoxications. Finally there is a purely functional form of this condition as referred to by Nothnagel in his exhaustive monograph. Cannon and Murphy working in the Harvard laboratories speak of it as follows: "When the nervous connections between the alimentary canal and the central system are intact, nothing is more remarkable than the responsiveness of the canal to conditions of general asthenia. In the asthenia of animals afflicted with distemper, for example, food will lie in the stomach or intestine all day without the slightest sign of a peristaltic wave passing over it. There is total stoppage of the motor activity of the digestive organs." It seems to me the case I have just described fits into the above pigeon hole.

Deep waters are reached in seeking explanation for adynamic ileus, and the mechanism of production in the various forms is by no means clear. It is reasonably certain, however, that the nervous apparatus controlling the bowel peristalsis plays the prominent part in the causation of the condition. Evidence is quite convincing that there is interference with the production or handling of normal impulses at certain nerve centers—sending and receiving stations, so to speak.

On this basis, then, paresis intestinalis is either of central or peripheral origin—in other words, the keyboards in the spinal cord and in the walls of the gut fail to create or properly handle the stimuli necessary to normal activity of the bowel.

Just how the keyboards are at fault is very conjectural: we ascribe the forms of adynamic ileus following operations, and those occurring during biliary, kidney and other colics to central or cord disturbances. We use the phrase "inhibitory through the splanchuics" to explain our lack of definite knowledge of the modus operandi.

Recent physiologic studies have seemed to prove that paresis of the bowel can result from disturbances to the myenteric plexus, i. e., the plexuses of the Meissner and Auerbach in the gut wall. Here is our peripheral keyboard—surely its intricacies admit of much study. A problem presents for investigation, How is this plexus thrown out of kilter? Do toxines affect its mechanism deleteriously? Does lack of good red blood impair its efficiency? Are other factors at work?

From a general physiologic standpoint, it is fair to assume that the ileus occasionally present in uraemia, pneumonia, etc., is dependent on circulating toxines which overwhelm the myenteric plexus. The toxines of peritonitis must involve the plexus directly, while in chronic constipation toxines generated in decomposing food can also reach the plexus by immediate contiguity.

Mesenteric thrombosis produces an ischemia throughout the myenteric plexus and of course no tissue functionates without nourishment. The case I have

described above as one of asthenic peristaltic arrest I assume is explained on the grounds of failure of nourishment. In the general systemic exhaustion the myenteric plexus shared and was unable to inaugurate or handle certain impulses necessary to peristaltic action.

BUBONIC PLAGUE—FROM THE CHINESE VIEW-POINT.

CONTRIBUTED BY D. S. MC CARTHY, M.D., HEMET, CALIFORNIA.

The following translation was made by Mr. J. Dyer Ball (H.M. Civil Service) from the Chinese reports of the epidemic that occurred in 1894 in Hong Kong and was contained in the medical report to the Colonial (British) Surgeon.

According to this report the treatment here recommended is practically the same as was carried out in the Chinese hospitals and represents the most "advanced views" of Chinese medicine:

"NOTITICATION BY PLANCHETTE BY THE GOD OF WAR OF PRECIOUS INSTRUCTIONS TO RESCUE THE WORLD:—A HARMLESS REMEDY TO DRIVE AWAY THE PLAGUE. DO NOT CONSIDER THE WORDS AS TOO MANY. IT IS URGENTLY REQUESTED OF YOU THAT YOU MUST CAREFULLY READ THIS AND REVERENCE PAPER WITH CHARACTERS ON IT.

"Whereas we have heard that calamities are caused by atmospheric influences and destiny:—Good deeds can cause an avoidance of them. The terrific plague has recently been prevalent; it depresses the hearts and is painful to the sight. Although already people of the whole place distribute prescriptions and medicines free, and offer up all manner of prayers to avert the calamity, which means are the best that men can devise as preventives, yet the noxious influences have not been swept away. The reason of this failure is because the people have not done all

the good deeds that they should tomove heaven and gain its approval.

It so happened that the gentlemen of the Society for Offering up Good Deeds, who had been eye-witnesses of the existing calamity, on the night of the 5th day of the 3rd moon, fasted and bathed their persons and reverently invited the gods to proclaim by Planchette a cure for the plague, to help the world. By good luck they were favored by the presence of Kwan Tai (the God of War), who descended from heaven to put his hand to the pen (of the Planchette) to write out his instructions which are more than a timely warning.

Really this god has an ardent desire to awaken the sleeping world and to instruct the people!

Should we not earnestly reform betimes?

With respect we record below the words of the Planchette in full:—

(This is followed by three sets of scribblings representing the markings of the Planchhette. The first is not like any writing at all, and no translation of its import is given. From what follows it is evidently intended to represent the halberd of the god. "Revelations by Planchette" Nos. 2 and 3 have, however, renderings of their meaning given as below. They are somewhat like writing.)

Revelation by Planchette No. 2:— The seal of Kwan So-and-So, Assistant Superintendent of the Department governing Pestilences.

Revelation by Planchette No. 3:— Honesty, Bravery, Intelligence.

The unworthy know their unworthiness themselves.

Revelation by Planchette No. 4:-

I am the Great Han (dynasty) Kwan So-and-So.

I inform you who seek for medicine. If worshippers ask concerning the

things of the present, You must know that the year has arrived at such a stage as not to be

peaceful;

And moreover near the city is a coal mine.

And irritating poison has collected for a long time and is very powerful.

You at ordinary times are wicked and rude.

In times of distress repent before the Buddhas and chant liturgies.

It is difficult to escape from destiny. Although there are charms and medicines, how can they be effectual?

You say that Canton suffers from this plague;

But I tell you that Shantung and Shansai will be more in danger.

There have already been warnings in Kingchow and Chihli.

Why have you not yet repented of your sins?

Fate now makes no mistake.

Firstly, men die because their destined existence ends.

Secondly, because they are punished for their secret iniquities.

The deaths now occurring only amount to ten or twenty per cent. of the number destined to die.

The time is not yet up for the termination of this calamity.

Strictly speaking I should not divulge what heaven has designed;

But with a view to protect children and sympathize with mankind,

There is nothing like carrying out an advice of mine.

(If you do so) I shall myself attend to the matter.

See how I acted in my previous engagements:

On all sides the devils feared and the gods reverenced me.

I entreat those who have no righteous thoughts, who slaughter animals as offerings to gods,

Who spend much on joss paper, incense and candles—

Can these deliver you from illnesses and prolong your lives?

Repent of your sins before me betimes, Swearing before heaven that you will do so.

Who is not aware of my bravery and propitiousness?

You should neither secretly nor openly deceive your fellow-creatures.

Vow that you will perform a charitable deed,

And thus establish a proof of your contrition which is not of small value;

Or show some evidence by founding charitable institutions;

Or read my liturgy and follow to the letter the instructions therein contained.

And when you have shown sufficiently that you have not deceived me, Kwan,

If you read my liturgy for ten days, you will be heard.

I, Kwan, shall appear then in person. You will then believe that I am to be revered and am propitious.

Revelation by Planchette No. 5:-

I, Kwan, was formerly favoured by the Emperor of the Ta Tsing (the present) dynasty by having conferred upon me certain additional titles: (these are) Inspector of all the Buddhas and all the Gods, Superintendent of the host of Genii and other Demi-gods, Dispensor of Elixirs and Permits of Longevity (and Governor) of the Dark Land which causes death, and Overseer of Matters connected with the

Buddha, K'e Lam. To which was added the title of Celestial Excellency. Again, thanks to the Gemmeous Ruler, Who, appreciating me for my loyalty, faithfulness and uprightness, allowed all important matters directed by him in connection with heaven to be passed by me before being put into force.

On the 24th day of the third moon, I went to the Tin Ts'ai Kw'un to offer congratulations on his birthday, and to deliberate concerning the important matters of life and death of the human race. Mounting back to the three heavenly gates I happened just to meet the two Gods of Fire and Wing and the Star of Gold, Venus, holding the Imperial Decree, descending from heaven to mortal abodes in great haste. stopped them and asked them concerning their mission. From them I learned that Heaven was exasperated and said that the world was overcrowded with people and had been for a long time increasingly harbouring wicked men; that even a small child of three feet in height was also full of evil deeds. Heaven had ordered Venus to go to the Palace of the Sea Dragon (Neptune) on a certain day of a certain moon to again cause floods in the rivers, to make the winds and the waters come into conflict, and the fire and the pestilence to burst out, which were to scourge and destroy more than one-half of the population as a manifestation of the endless permutations of the creative power. I hurriedly stopped them and ran up to the Palace of Heaven in haste, and with a distressed heart memorialized the Gemmeous Ruler, praying that he (the Ruler) would bear in mind the virtue of having consideration for human life. Now. thanks to the Gemmeous Ruler, who revoked two of his decrees, has limited the time for destruction to half a year.

In every city or town, should there have been the number of five thousand families who had repented and showed

true evidence of reformation, the Inspectors of Human Merits and Demerits on duty were to be directed to memorialize (in favour of them) to the Heavenly Throne. Whereupon Heavenly Throne ordered me, Kwan, to superintend matters connected with the Board of Pestilential Visitations, and to immediately despatch one hundred Inspectors of Merits and Demerits to each province, and one thousand spirits of the defunct virtuous and upright Government Officials and demons of the night, whose duty it should be to go amongst the human race to examine So now we have devils their deeds. and men in company with each other. Is it possible for you men of flesh to be aware of this? But demons of pestilence do not enter the doors of those who are filial to their parents and true to their friends, and you need not be alarmed if you are (such).

I hope you unworthy creatures will remember the report made by me, Kwan, interceding on your behalf and my deepest sympathy for you. should also remember my ardent desire in making these revelations by Planchette. Do not say that the calamity is now all over and that there is no danger. Of course, I have no right to reveal the secrets of Heaven without any reason; but I have been compelled to reveal them. Hence I have done so. I am apprehensive that one manuscript of my revelations would not induce people to carry out my intentions, thus frustrating the object of my urgent petition. Should anyone be found presuming to blaspheme concerning these instructions of mine, then small offenders of this kind shall be consumed by the fire of pestilence; and as for the great offenders I shall order my orderly Chow Chong to put them to death with the halberd, which they are not to resent. Now as I. Kwan, am the Assistant Superintendent of the Board of Pestilence people cannot escape from this

calamity without my assistance. I, Kwan, am an upright and just god and am not such a god as those who covet animals offered in sacrifice and worship. This being so, are my instructions to be trifled with? If you really crave my protection, let the rich subscribe their names to benevolent institutions. When I find there is any evidence of this being done, I shall be satisfied that they are sincere and true. Let those who are poor, recite my liturgy. If I find that their hearts are in accord with my liturgy, I shall be satisfied that they are sincere and true.

Should women be unable to read my liturgy, let them each morning and night burn some sticks of incense, and pray aloud, which will move me; but none except those who are loyal and filial, honest and virtuous, should read my liturgy. This is important. But as to those who were formerly wicked and cruel, but now have become filial and faithful to friends, those who used false weights and measures and who have become honest and upright and in general have changed from all their former evil deeds, it is not too late for these classes to repent. If you are really sincere and will not deceive me, Kwan, you should swear before me and sketch out my precious halberd after the pattern given here, inserting in it the thirty-six circles which will serve as evidence of your sincerity.

Below it write the characters, "Assistant Superintendent of the Department Governing Pestilences, the seal of Kwan So-and-So." These ten characters, together with the picture of the halberd, posted before the door of the house will prevent the demons of plague from disturbing you; but, on the other hand, if you, having not sworn before me and promised repentance, should have posted up my name without my authority, you shall not be treated with leniency, should this, your conduct, be reported to me by the Inspector of Mer-

its and Demerits. After your repentance you should immediately take the medicines I shall herein prescribe. In addition to so doing, burn some waterpurifying charms in your family wells and also throw into them some garlic and some KWUN CHUNG (medicine). This is a precaution against plague because the water (in the family wells) is becoming colder and poisonous in the plague season, to which has been added the filthy fluid from the bodies of the dead rats which has percolated into them from the drains.

Without taking the above precautions nothing will be of avail in warding off the plague. Should there be any buboes on bodies of the sick, get some sharp pointed itching taro and rub it well on the chest and back and the joints of the bones. But as there are so many forms of diseases it is not easy for common doctors to detect the symptoms of this disease. When the disease begins, more generally the head is giddy, and it is accompanied with fever and cold at intervals; the mouth has a difficulty in articulating. If buboes appear on the skin with eruptions lined with red lines, use a silver needle to prick them, that the poisonous blood may ooze out; but if the dark poisonous blood has extended its attack to the heart the disease is highly dangerous, in which case get some sharp pointed itching taro and boil it with water in a clean saucepan till the water becomes thick with it. It (the water) should then be taken internally. This will dissipate the dark poisonous blood.

I, Kwan, for this special purpose have here given these my revelations (by Planchette), my ardent and real desire being to look after the country and relieve the people.

Do not compare these my instructions to false words, then I shall feel honoured. If any person distributes twenty copies of this, he will save himself, and, if two hundred copies, his whole family,

Take two mace each of Kw'un Chung. Ngau P'ong Tsz, Sh'an Chi' Tsz, Forsythia suspensa (L'in K'i'u'), Kwai shan, Libanotis (Fong Fung), China root from Yunnan (Wan Ling); Liquorice-root (Kam Ts'o) one mace; half a mace each of Atractylodes Chinensis or Rubra (Ts'ong Shut), Sz Ch'un Justicia (or possibly leontice) (Ch'un L'in), Areca Catechu (Pan Long), putchuk (Muk Heung); four mace of Cypress (P'in Pak); three mace each of magnolia hypolenca (Hau P'ok), midsummer root (prepared from two or three Aroid plants) (F'at H'a); five mace each of Evonymus Vieboldianus (?) (Wai Mau), roots of rushes (?) (phragmites) (?) (L'o Kan).

Should fever come on and buboes appear, boil the above medicines in water and take (the water) internally. In this illness sometimes there is a kind of evil wind enters into the chest. This wind will prevent the sufferer from swallowing and make him throw up any medicine he has taken. (If this is the case) first get one candarin weight

of T'ung Kw'an powder and blow into the nostrils. For simultaneous purging and vomiting and cramp; for convulsions of infants, purging and vomiting, where cooling medicines do no good. with slight fever in the afternoon which is light during the day and heavy at night, with the eyes turning up: for these two ailments take away from the prescription the Ngau P'ong Tsz and Sh'an Chi' Tsz, but boil the Yunnan China root and the Cypress, the Wai Mau and Lo' with two mace each of Ts'ong Shut (Atractylodes Chinensis or Rubra) and Fok Heung, and one mace of cloves and take the water internally.

As regards those who are really sincere and faithful and suffering from diseases (other than those mentioned here) for curing which different diseases the above medicines are not the proper remedies, I will personally go to their houses to treat them.

I will not retract these words. I expressly give these revelations with the pen of the Planchette."

UNITED STATES ARMY MEDICAL RESERVE CORPS.

BY R. M. O'REILLY, SURGEON-GENERAL, U. S. A.

A Medical Reserve Corps, as a constituent part of the Medical Department of the Army, is authorized by an act of Congress approved April 23, 1908, entitled "An Act to increase the efficiency of the Medical Department of the United States Army." Its provisions are as follows:

"Sec. 7. That for the purpose of securing a reserve corps of medical officers available for military service, the President of the United States is authorized to issue commissions as first lieutenants therein to such graduates of reputable schools of medicine, citizens of the United States, as shall from time to time, upon examination to be prescribed by the Secretary of War, be

found physically, mentally and morally qualified to hold such commissions, the persons so commissioned to constitute and be known as the Medical Reserve Corps. The commissions so given shall confer upon the holders all the authority, rights, and privileges of commissioned officers of the like grade in the Medical Corps of the United States Army, except promotions, but only when called into active duty, as hereinafter provided, and during the period of such active duty. Officers of the Medical Reserve Corps shall have rank in said corps according to date of their commissions therein, and when employed on active duty, as hereinafter provided, shall rank next below all

other officers of like grade in the United States Army: Provided, That contract surgeons now in the military service who receive the favorable recommendation of the Surgeon-General of the Army shall be eligible for appointment in said reserve corps without further examination: Provided further, That any contract surgeon not over twenty-seven years of age at date of his appointment as contract surgeon shall be eligible to appointment in the regular corps.

Sec. 8. That in emergencies the Secretary of War may order officers of the Medical Reserve Corps to active duty in the service of the United States in such numbers as the public interests may require, and may relieve them from such duty when their services are no longer necessary: Provided, That nothing in this Act shall be construed as authorizing an officer of the Medical Reserve Corps to be ordered upon active duty as herein provided who is unwilling to accept such service, nor to prohibit an officer of the Medical Reserve Corps not designated for active duty from service with the militia, or with the volunteer troops of the United States, or in the service of the United States in any other capacity, but when so serving with the militia or with volunteer troops, or when employed in the service of the United States in any other capacity, an officer of the Medical Reserve Corps shall not be subject to call for duty under the terms of this section: And provided further, That the President is authorized to honoraably discharge from the Medical Reserve Corps any officer thereof whose services are no longer required: And provided further, That officers of the Medical Reserve Corps who apply for appointment in the Medical Corps of the Army may, upon the recommendation of the Surgeon-General, be placed on active duty by the Secretary of War and ordered to the Army Medical

School for instruction and further examination to determine their fitness for commission in the Medical Corps: And provided further, That any officer of the Medical Reserve Corps who is subject to call and who shall be ordered upon active duty as herein provided and who shall be unwilling and refuse to accept such service shall forfeit his commission.

SEC. Q. That officers of the Medical Reserve Corps when called upon active duty in the service of the United States, as provided in section eight of this act, shall be subject to the laws, regulations, and orders for the government of the Regular Army, and during the period of such service shall be entitled to the pay and allowances of first lieutenants of the Medical Corps with increase for length of service now allowed by law, said increase to be computed only for time of active duty: Provided, That no officer of the Medical Reserve Corps shall be entitled to retirement or retirement pay, nor shall he be entitled to pension except for physical disability incurred in the line of duty while in active duty: And provided further, That nothing in this Act shall be construed to prevent the appointment in time of war of medical officers of volunteers in such numbers and with such rank and pay as may be provided by law.

PAY AND EMOLUMENTS.

Officers of the Medical Reserve Corps have the rank of first lieutenant, mounted, and, when on active duty, receive the pay of that grade, namely \$2,000 per annum, or \$166.66 per month.

At the end of five years' active service an increase of ten per cent is received, making \$2,200 annually, or \$183.33 per month. This 10 per cent increase is given for each period of five years' active service, until at the end of twenty years the maximum increase of 40 per cent is received, making \$2,800 per year, or \$233.33 per month.

Officers of the Medical Reserve Corps on active duty, in addition to their pay are furnished with quarters either in kind or by commutation at the rate of \$36 per month. Fuel and light are also provided. When traveling on duty mileage is allowed, the amount usually being sufficient to cover all expenses of the journey.

On changing station they are entitled to transportation for professional books and papers, and baggage, including household effects.

Being mounted officers, they are provided with horses and horse equipments when necessary. Groceries and other articles may be purchased from the commissary. Instruments and appliances and professional books and journals are liberally supplied for the use of all medical officers in the performance of their duties.

Leave of absence on full pay may be allowed at the discretion of the proper superior authority at the rate of one month per year. Absence from duty on account of sickness involves no loss of pay.

In addition to a limited number of officers of the Medical Reserve Corps who are on active duty with the Army in time of peace, it is desired to maintain a list of qualified men all over the country who are willing to serve as medical officers in time of emergency. To such men the President is authorized to issue commissions, and it is expected that, as long as they are under commission, they may be relied upon to give service when called. Officers of the Medical Reserve Corps cannot be compelled to accept active service, but should it be declined when offered. the commission will be vacated. Nothing prevents Medical Reserve Corps officers serving with the militia, or with the volunteer troops of the United States, or in the service of the United States in any other capacity, and when so serving or employed they are not subject to call for active duty with the Army. Officers of the Medical Reserve Corps who make application for active service may receive such assignment when the necessity exists.

Approved candidates for the Medical Corps who have fulfilled the entrance requirements, will be temporarily commissioned as first lieutenants of the Medical Reserve Corps until they have passed through the Army Medical School and their fitness for the Medical Corps has been finally determinded. (See circular of information for candidates for the Medical Corps.)

APPOINTMENTS.

Appointment to the Medical Reserve Corps of the Army is made by the President after the applicant has passed a successful examination before an examining board detailed from the Medical Corps of the Army and has been recommended by the Surgeon-General.

Permission to appear before the board is obtained by letter to the Adjutant-General of the Army, which must be in the handwriting of the applicant, giving the date and place of his birth and the place and State of which he is a permanent resident. He must also furnish certificates, based on personal acquaintanceship, from at least two reputable persons as to his citizenship, character, and habits.

QUALIFICATIONS.

An applicant for appointment in the Medical Reserve Corps must be between twenty-two and forty-five years of age, a citizen of the United States, a graduate of a reputable medical school legally authorized to confer the degree of doctor of medicine, and must have qualified to practice medicine in the State in which he resides.

EXAMINATION.

The examinations for appointment in the Medical Reserve Corps will be held from time to time at convenient places throughout the country and will embrace the following:

- r. Physical examination. This will be thorough and will conform to that required for officers of the Army in general.
- 2. Examination of diplomas, certificates from state examining boards, certificates of membership in medical societies, and any other certificates or testimonials which the applicant may wish to submit.
- 3. An examination on the following practical subjects:
- (a) Practice of medicine, including etiology, clinical description, pathology, and treatment of diseases.
 - (b) Surgery-principles and practice.
 - (c) Obstetrics and gynecology.
- (d) Hygiene—personal and general, especially as to the prophylaxis of the more prevalent epidemic diseases.

This examination will be oral and sufficiently comprehensive to determine whether, in the opinion of the board, the applicant is (or is not) qualified to practice his profession under the usual conditions of the military service.

Should the oral examination in any subject be unsatisfactory the applicant may be required to take a written examination on that subject.

Successful candidates will be recommended to the President for commission.

It is recognized that except for the limited number of Medical Reserve Corps officers who are on active duty in the Army in time of peace there are

few material inducements for representative physicians to apply for appointmen in the corps. The possession of a commission from the President of the United States setting forth his confidence in the patriotism, fidelity, and abilities of the holder is, however, something that anyone might be proud of, and the contact that the War Department will be able to maintain with the best class of young medical men throughout the land will, it is expected, be of great value in emergency.

It is especially hoped that medical officers of the militia of the various States may be sufficiently interested to secure positions on the Medical Reserve Corps list.

Officers of the Medical Reserve Corps who may desire to enter the Medical Corps of the Army must be between twenty-two and thirty years of age (except in the case of former contract surgeons who entered the service as such before the age of twenty-seven and who were in the service at the time of the passage of the act of April 23, 1908); they must fulfill all requirements for appointment in the Medical Corps that are imposed upon applicants who are not members of the Medical Reserve Corps. Full information in this regard is contained in "Circular of Information in relation to appointment in the Medical Corps of the United States Army, the requisite qualifications, examination of applicants, etc.," a copy of which will be furnished upon application."

FILARIA LOA-A CASE REPORT.

BY E. A. MACDONALD, M.D., REDLANDS, CALIF.

On April 30th, Mr. A. R. came into my office and said that he had a "worm" in his eye which bothered him and that he desired me to remove it.

He gave the following history: He was 28 years old and previous to Janu-

ary 28th, 1908, had lived for nine years in the Old Calabar region on the west coast of Africa. He had had malaria and a number of West African diseases and had also had a great deal of irritation of the eyes. For two years he had

been conscious of something moving under the conjunctiva and had seen "the worm" by looking in a mirror. I would disappear for weeks and then reappear. He had consulted oculists both in London, England, and in this country, but at these times the "worm" would invariably disappear, making its removal impossible.

Upon inspection I saw a moving object about one inch long between the eyeball and the conjunctiva. The patient's description of a "moving snake under a sheet on the floor" was very apt.

After several unsuccessful attempts—for it evaded the instrument—the "worm" was seized together with the overlying conjunctiva by means of a lock forceps, an incision was made in the conjunctiva, the filaria grasped with a pair of iris forceps and brought through the conjunctival opening. The removal was followed by some conjunctivitis, which cleared in a few days and the patient has been free from further trouble.

DUAL SLEEPING.

According to the *Lancet*—and few competent observers will doubt the accuracy of its opinion in this matter—no two persons, no matter who they are, ought habitually to sleep together. The probability is that one will thrive, while the other will not have first-class health. An aged person and a child should not be bed-mates. Great as is the pleasure to grandma to have her little grand-daughter with her at night, it is a pleasure which the wise as well as fond relative will gladly forego for the child's benefit.

A case has occurred in which two sisters, aged seventeen and fifteen, slept together. The younger was a splendid specimen of girlhood, robust, active and well-developed. The latter, although not sick in any definite way, was thin,

became easily tired, and was worried about trifles like a nervous old woman. A relative, a physician, made a summer visit to the father of these girls, and his trained eyes quickly noticed the morning lassitude of the older young woman and the freshness of her sister at breakfast, or before that meal. Inquiry of the mother disclosed the fact that the two not only slept together, but that so devoted were they to each other that they usually went to sleep with the arms of the one around the other.

The doctor, of course, protested against this habit, and eventually persuaded the girls to sleep apart. Two brass beds in the same room offered propinquity and comfort, with the result that in six months' time the elder girl showed a marked improvement in her general health, and soon afterward became a happy, even-tempered young woman, with a considerable increase in weight. In this instance the improvement dated from the moment of separate beds.

JAPANESE ARE LEGAL PRAC-TITIONERS.

The Attorney-General has announced that the medical statute does not require that an applicant for a license shall be a citizen of the United States. If he be a graduate of a duly authorized Japanese medical college, with the requisite four years' course of study, and if he be otherwise qualified. a license shall be issued if he pass the requisite grade.

We commend kelene to the profession. Ethyl chloride, of which kelene is a pure article, often saves general anesthesia. Kelene is also frequently used as a preliminary to general anesthesia and is becoming itself quite popular as a general anesthetic. For literature write Fries Brothers, 92 Read street, New York City.



A MEDICAL, CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE.

Established in 1886 by WALTER LINDLEY, M.D., LL.D., Editor and Publisher.

This journal endeavors to mirror the progress of the profession of California, Arizona and New Mexico.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN. Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW, Associate Editors.

Address all communications and manuscripts to
EDITOR SOUTHERN CALIFORNIA PRACTITIONER.
Subscription Price, per annum, \$1.00.
1414 South Hope Street, Los Angeles, California.

DITORIAL

THE FUNCTION OF THE THYMUS.

Since the time of Brown-Sequard the function of the thymus has been an object of much speculation as well as investigation. Formerly it was held that this gland shows its maximal development at birth, and at puberty begins to atrophy rapidly being replaced by fatty and lymphoid tissues. Recent investigation has not supported this Histological observation has view. shown the so-called lymphoid tissue to be endothelial. While it is true that changes of an atrophic nature do occur. nevertheless active cells remain in the thymus throughout the life of the individual.

Perhaps on account of the proximity of the thymus to the thyroids a notion that this gland exercises some regulating influence over the general nutrition of the body gained considerable prominence, and found its way into some physiological text-books. This alleged function of the thymus was taken up a few years ago by Paton and Goodall of England whose investigations show the fallacy of this belief.

Later Paton continued his study of the thymus and in collaboration with Henderson published a research of primary importance. These physiologists found that if an animal is castrated before puberty the changes which occur usually in this gland do not take place, but on the contrary this gland hypertrophies until almost double its former size. Conversely Paton and Henderson found that the removal of the thymus from young animals leads to a marked increase in the size of the testes and

ovaries. From their experiments Paton and Henderson concluded that the internal secretion of the thymus regulates the metabolism of the reproductive glands, and that conversely the ovaries and testes through their internal secretion exert a similar influence over the thymus.

S.

COMMENCEMENT OF THE COL-LEGE OF MEDICINE, U. S. C.

The twenty-third annual session of the College of Medicine of the University of Southern California terminated on June 18, when a class of twenty-five young men and one young woman received their diplomas as doctors of medicine.

The commencement exercises were held in conjunction with the other departments of the University at the Temple Auditorium and the frontispiece of this issue of the Practitioner gives an idea of the appearance of the stage. It is gratifying to the friends of the University to note its rapid growth, the total attendance of students being more than fifteen hundred, the professional departments of medicine, law and dentristly having student bodies as large or larger than the other schools of the State

The roll of the graduating class of the College of Medicine is as follows:

Andre Boigelot Frank E. Hull
Edmond Cahen Harry A. Huntoon
Clarence W. Cook Alanson H. Jones
Wirt B. Dakin Archibald C. MacThomas C. Doak leish
Calvert L. Emmons Ralph H. Newcomb
Henry O. Eversole Joseph J. O'Brien
Theodore G. Finley Elmer R. Pascoe

M. A. S. Frank
Charles M. Graham
Karl Ross
Seman W. Hastings
Paul E. Simonds
James F. Holleran
Elsa H. Horstmann
William L. Weber
Walter L. Huggins

It has been a source of gratification to the College of Medicine, U.S.C., that its graduates have been sought for as internes and that it has been possible for every single graduate who so desired to obtain hospital experience prior to entrance into private practice.

This year the following graduates in medicine secured interneships and will be resident physicians at the following hospitals during the coming year:

LOS ANGELES COUNTY HOSPITAL.

Dr. Edmond Cahen.

Dr. T. H. Finley.

Dr. M. A. S. Frank.

Dr. Frank E. Hull.

Dr. Ralph H. Newcomb.

Dr. Elmer R. Pascoe.

CALIFORNIA HOSPITAL.

Dr. S. Wood Hastings.

Dr. J. J. O'Brien.

SISTERS' HOSPITAL.

Dr. James F. Holleran.

SOLDIERS' HOME HOSPITAL.

Dr. Calvert L. Emmons.

ALAMEDA COUNTY HOSPITAL

Dr. Andre Boigelot.

Dr. Caspar L. A. Rinker.

WOMEN'S AND CHILDREN'S HOSPITAL OF
SAN FRANCISCO.

Dr. Elsa H. Horstmann.

LAKESIDE HOSPITAL OF CLEVELAND, OHIO.

Dr. Henry Eversole.

SHANNON HOSPITAL OF CLIFTON, ARIZONA.

Dr. John H. Tebbetts.

The Barlow prize of one hundred dollars, bestowed on the graduate having the highest standing in the work of the four years, was given to Dr. S. Wood Hastings, with honorable mention to Dr. Elsa H. Horstmann and to Dr. A. C. Macleish.

On the evening of June 17, the Alumni Association of the College entertained the faculty and graduating class at a banquet held at Levy's, Dr. Raymond Taylor presiding as toastmaster and toasts being responded to by Drs. W. Jarvis Barlow, Granville MacGowan, Frank Bullard and A. C. Macleish. These gentlemen spoke of the work, advances and needs of the College, Dr. Bullard reading one of his poetical effusions, which is printed elsewhere in this issue.

This commencement completed the first year of the very successful service as Dean of Dr. W. Jarvis Barlow, to whose untiring efforts the College is indebted for many betterments. In the work, however, of improving the work of the College, credit must be given to all members of the faculty alike for their loyal and generous service, as well as to the student body for its willingness to co-operate in the efforts to make the classroom, laboratory, clinic and hospital work come up to the highest possible standards.

The year 1908 has been then, a most successful year. The College bespeaks the co-operation and good will of its friends and pledges itself to give to the students entrusted to its care a medical education of highest standards and a training that will make them as practitioners, a credit to their alma mater, to their profession and to Southern California.

URIC ACID DIATHESIS.*

The book is prefaced by a brief historical review of the subject. Several chapters are given to a consideration of the physical and chemical properties of uric acid. The author holds views not unlike those of Dr. Haig of England. On page 289 Dr. Gilbert writes "it cannot longer be doubted that the careful researches of recent years point unmistakably to the fact that uric acid is one of the waste products of the human organism most often retained and responsible for many of the common ills." Instead of scrutinizing the careful researches of the past few years to determine whether or not they warrant the above statement, the author assumes the above as an axiom in support of which he attempts to collect evidence. It is not possible for physiologists to interpret recent investigation in such a manner as to warrant our considering "uric •acid responsible for many of the common ills." Experiments in which large amounts of urates were injected over extensive periods did not give results supporting this view.

Regarding the uric acid dissolving power of some substances Dr. Gilbert writes on page 278 "we cannot blind ourselves to the fact that after the ingestion of the alkali-eliminant, strongly acid urine may be changed to a neutral or slightly alkaline urine. This means, if it means anything, that the blood brought to the kidneys from which the urine is dialyzed has suddenly become more alkaline than before." The state-

^{* &}quot;A Text-Book on Uric Acid and Its Congenors." Danbury Medical Printing Company, 1907, by George Abner Gilbert.

ment contained in the first sentence is not to be disputed, but since urine is not a dialysate the conclusion of the syllogism that the blood has become more alkaline than before does not follow. It is generally admitted by physiologists that so-called "uric acid diatheses" are characterized by altered nuclear metabolism in which uric acid bears no aetiological relation to the metabolic condition.

EDITORIAL NOTES

Major Paul A. Adams is surgeon of the Seventh Regiment N. G. C.

Dr. Win Wylie of Redlands has been visiting his daughter in Seattle.

Dr. G. W. Harrison of Albuquerque, N. M., has located in Denver, Colo.

Dr. E. H. Smith, recently of Hanford, is now practicing in Corona.

Dr. C. L. Rich of Fullerton, who has been quite ill, has now fully recovered.

Dr. Emmet Rixford of San Francisco has as a fad the raising of edible snails.

Dr. W. Edward Hibbard of Pasadena is spending the summer in London and Paris.

Dr. C. H. Whitman of Los Angeles has located in the Wright and Callender building.

Dr. Solon Briggs of Pasadena has been very ill from pneumonia in Jacksonville, Ky.

Every eighth woman who has passed the age of thirty-five years is doomed to die of cancer.

Dr. L. C. Toney of Phoenix, with his family, is spending the summer at Humboldt, Ariz.

Dr. T. C. Donnell of Long Beach is again well and attending to his professional duties.

Dr. R. N. Looney of Prescott, Ariz., spent a week with his mother in Oklahoma early in June.

Dr. A. E. Troutman of Guadalajara, Mexico, spent the month of June in the Los Angeles hospitals. The Presbyterians have secured a site in Albuquerque, N. Mex., for a great national tuberculosis sanatorium.

Dr. E. H. Norton has been appointed Assistant County Physician with headquarters in Rawhide, Nev.

Dr. R. M. Tafel of Phoenix, Ariz., has just returned from hospital work in Chicago and New York.

Dr. Herbert Johnston of Anaheim, Cal., attended A. M. A. and also visited his old home in Toronto.

Dr. H. M. Robertson of Riverside has been attending the clinics of some of Chicago's eminent surgeons.

"The Sphere of a Trained Nurse" is the title of an interesting brochure by Dr. W. A. Newman Dorland.

Dr. J. L. McCarthy of Goldfield, Nev., and Miss Elizabeth Peters of Omaha were married June 22nd.

Dr. P. G. Capp has opened an office at Crown King, Ariz., and has taken charge of the Crown King Hospital.

Dr. A. L. Kelsey of Los Angeles has moved to the Wright & Callender building, corner of Fourth and Hill streets.

Dr. Victor E. Hitch has been appointed official physician for the Rawhide Baseball Association, Rawhide, Nev.

Dr. Arthur W. Hurd of Buffalo, N. Y., has been visiting Riverside, Cal., where he owns a valuable orange grove.

Dr. John A. Gale, one of California's well-known practitioners, has located at

210 West Twenty-eighth street, Los Angeles.

Dr. Ira E. Brown has accepted the position of surgeon to the Congress Consolidated Mining Company, Congress, Ariz.

Mrs. Sarah A. B. Perce, wife of Dr. L. A. Perce, died at their home, 419 Pacific Ave., Long Beach, on the night of May 29th.

Dr. R. N. Looney of Prescott is the first physician in Nothern Arizona to discard the faithful horse in favor of an automobile.

Drs. Harry M. Sherman and George J. McChesney are now located in the Union Square building, 350 Post street, San Francisco.

Drs. H. G. Brainerd and William Duffield of Los Angeles recently spent a few days in Prescott, Ariz., on professional business.

Dr. H. Bert Ellis of Los Angeles was chairman of the Committee on Credentials at the meeting of the American Medical Association.

Dr. John E. Bacon of Tombstone is spending his vacation at Wellsboro, Pa., visiting his father, Dr. Morgan L. Bacon, of that place.

Dr. John Uri Lloyd of Cincinnati and Dr. J. A. Munk of Los Angeles have been making archaeological explorations in New Mexico.

Dr. J. E. Payton has been putting in a few weeks in Eastern hospitals. He also dropped in on the National Republican convention in Chicago.

Dr. P. C. H. Pahl of Los Angeles will hereafter have office hours from 10 to 12 at 934 West Seventh and from 2 to 4 in the Lissner Building.

Dr. Clarence G. Toland of Pomona, who has been ill in a Los Angeles hospital, is now able to take up the practice of his profession again.

Dr. Sumner J. Quint of Los Angeles has just gone through the strenuous

labor of moving from the Potomac Building to the Coulter Building.

Dr. L. A. Perce of Long Beach is in Kansas City attending the annual meeting of the National Eclectic Medical Association, of which he is president.

Dr. J. M. Lacy of Santa Ana, who has for six months been resting and recuperating at Fallbrook, is at home again and resumed professional work.

Dr. F. W. Sawyer of Castle Hot Springs, and Dr. Louis Dysart of Phoenix, were among the Arizonians who attended the meeting of the A. M. A. at Chicago.

Dr. L. P. Kaul, Assistant Chief Surgeon of the United Verde Copper Company of Jerome, Ariz., is spending a well-earned vacation visiting different California towns.

Diphtheria is again prevalent in the Southern California Hospital for the Insane. Dr. D. C. Strong, the San Bernardino County Health Officer, has quarantined the institution.

Beginning with January, 1909, the price of the *Index Medicus* will be increased to \$8 per annum. It is published by the Carnegie Institution of Washington, Washington, D. C.

Dr. Ancil Martin of Phoenix climbed to the summit of the San Francisco (Arizona) Mountains on Wednesday, June 17. From an altitude of 14,000 feet he witnessed a glorious sunrise.

The California State Journal of Medicine, Medical Society of the State of California, and Philip Mills Jones, M.D., of San Francisco, have changed their offices to the Butler Building.

Miss Alice Magaw, a trained nurse employed by the Mayo Brothers in Rochester, gave anesthetics to seventeen thousand patients without a death and then married an Iowa doctor.

Dr. P. C. Remondino of San Diego has been appointed Professor of the History of Medicine and Medical Bibliography in the College of Physicians and Surgeons of Los Angeles.

Dr. Royal F. Clark died of apoplexy at his residence in Los Angeles on June 15th. He graduated from the Medical College of the Pacific, class of 1879, and has practiced in Los Angeles for many years.

Dr. H. B. Tebbetts, Assistant Health Officer of the city of Los Angeles, and Mrs. Harriet Baurman, daughter of Dr. S. C. Bogart, also of Los Angeles, were married at Christ Episcopal Church June 20.

Four thousand six hundred and seven patients were anesthetised for the Mayo Brothers during 1907 and chloroform was used but four times, chloroform and ether combined was used twenty-eight times.

Dr. J. K. McDonnell, councillor of the Arizona Medical Association, has moved from Crown King to Fossil Creek, where he has accepted the position of surgeon for the Arizona Power Company.

Dr. Elsa H. Horstmann, who graduated from the College of Medicine of the University of Southern California in 1908, has received the appointment of interne in the Children's Hospital at San Francisco.

Dr. Chas. E. Williams of Auburn, Me., visited Los Angeles in June. Dr. Williams graduated from the College of Physicians and Surgeons (New York) in 1879 and is ex-president of the Maine State Medical Society.

At a recent meeting of the City Council of Prescott, Ariz., an ordinance was passed at the request of the Yavapai County Medical Society providing for compulsory notification and fumigation in all cases of tuberculosis.

Dr. Jas H. McBride of Pasadena has been chosen a delegate from the American Medical Association to the 60th International Medical Congress to be held in Budapest next year.

- Dr. F. Fremont-Smith, Washington, is the author of the following reprints:
 - I. Local Arteriosclerosis.
- 2. The effect of Florida Climate Upon Acute and Chronic Disease.
 - 3. Arteriosclerosis in the Young.

Dr. Raymond Russ of 2510 Washington street, San Francisco, is author of two reprints: (1) The Magnesite Splint; a New Permanent Surgical Dressing. (2) Surgical Aspects of Varix of the Lower Limbs.

Drs. Norman Bridge, F. C. E. Mattison, W. Edward Hibbard, J. H. Mc-Bride, Stanley P. Black, Mary Hagadorn, Caroline McQuiston and Henry H. Sherk, all of Pasadena, attended the American Medical.

Two reprints of great interest from the man from Missouri, Dr. C. H. Hughes of St. Louis:

- (1) Thaw and His Mental Status.
- (2) Paresis, Epilepsy and Epileptoid as Menaces to Railway Safety.

William Harvey in 1616—the year of Shakespeare's death—began the course of lectures in which he first brought forward his great discovery—the circulation of the blood. Sir Francis Bacon was one of his patients.

Dr. and Mrs. Boardman Reed announce the marriage of their daughter, Helen Frances Kingsbury, to Mr. Howard John Hogle, Wednesday evening, June 3d, 1908, at The Evergreens, South Granada Avenue, Alhambra, California.

Dr. Kopke has sold the Mentone Sanitarium of Redlands to some Portland capitalists. Dr. Perry will be the physician in charge and Drs. Hoell Tyler, S. Y. Wynne and E. A. MacDonald, all of Redlands, will be the consulting physicians.

Dr. E. Myrtle Wellcome, resident physician of the Pacific Hospital, and Edward A. de Balois are to be married in August. Dr. Wellcome graduated from the College of Medicine of the University of Southern California in the Class of 1905.

Dr. J. O. Chiapelle, who is practicing in San Francisco, has been taking a vacation in Los Angeles. The Doctor graduated from the College of Medicine of the University of Southern California in the class of 1905, and has many friends in Southern California.

Dr. F. W. Hatch of Sacramento, General Superintendent of State Hospitals, was at the Southern California Hospital for the Insane at Patton, June 24. He expressed himself as well satisfied with the manner in which Dr. Williamson was handling the diphtheria epidemic.

Dr. L. A. Perce of Long Beach, president of the National Eclectic Medical Association, delivered an address in Kansas City on June 22 before the American Institute of Homeopathy in which he advocated a coalition between all schools of medicine opposing the "allopaths."

We are glad to announce that Dr. Solon Briggs, who was taken dangerously ill from pneumonia while on a visit to Jacksonville, Ky., has entirely recovered. Dr. Charles A. Briggs, also of Pasadena, spent several weeks in Jacksonville in attendance on his brother.

The New York Academy of Medicine announces that the sum of one thousand dollars will be awarded to the author of the best essay in competition: Subject: "The Etiology, Pathology and Treatment of the Diseases of the Kidney." For particulars address Dr. John A. Wyeth, Academy of Medicine, New York City.

Dr. John B. Murphy has resigned as professor of surgery and co-head of the department in Rush Medical College, and has accepted the professorship of surgery and head of the department in Northwestern University Medical School and position of attending sur-

geon at Mercy Hospital. The Northwestern is one of the foremost schools in America.

Dr. W. B. Dakin has taken an interneship in Alexian Brothers' Hospital, Chicago. During the last half of his interneship he will be assistant to the professor of surgery of the Northwestern University. Dr. Dakin is a member of the graduating class of the Medical College of University of Southern California, class of 1908.

Dr. Charles P. Wagar, editor of the California Medical and Surgical Report, died June 7, 1908, of cancer of the stomach. Dr. Wagar came to Los Angeles from Toledo about three years ago. He was a genial, amiable man and was very prominent in Masonic circles. He was a member of the California Club and stood well as a citizen.

The following officers have been elected unanimously by the American Medical Association: President, Dr. W. C. Gorgas, chief sanitary officer of the Canal zone; vice-president, Dr. Thomas Jefferson Murray of Butte, Mont.; general secretary, Dr. H. Simmons, reelected; treasurer, Dr. Frank Billings of Chicago, re-elected.

Mr. Walter Watkins, who for seven years has been cashier of the California Hospital, was married on June 4 to Hortense Pattee. During the last three summers Mr. Watkins has varied his duties by acting as cashier at Idyllwild and Miss Pattee has, during those same seasons, been stenographer at the mountain inn. This year Mr. Watkins is manager at Idyllwild.

Forty members of the Nu Sigma Nu Fraternity held their annual banquet at the Angelus Hotel on the evening of June. 6. Dr. J. C. Ferbert was toastmaster and toasts were responded to by Drs. F. D. Bullard, E. C. Moore, E. T. Dillon, H. B. Tebbets, Dudley Fulton and A. S. Granger. Professor Baum-

gardt followed with a beautifully illustrated lecture on Venice.

Dr. B. W. Bizzell died in Phoenix, Ariz., June 26th. He was born in Alabama in 1863 and graduated from the Atlanta Medical College in 1887 and took a second degree from College of Physicians and Surgeons, New York City in 1888. He was formerly president of the State Board of Health of Georgia. The body was cremated in Los Angeles and the ashes sent to his boyhood home, Enton Ala.

Dr. Will Mayo of Rochester invariably has a woman for his anesthetist and a woman for his chief assistant. In doing this Dr. Mayo is following the example of Dr. Geo. W. Lasher, the Los Angeles surgeon who for many years has always had women for his assistants. Drs. Lasher and Mayo maintain that they get an absolute devotion to duty from women that they cannot get from men.

At the alumni banquet of Northwestern University Medical Association held recently in Chicago there were 800 physicians. Dr. H. O. Marcy of Boston says this was the largest alumni banquet ever held in the United States. Another distinctive feature was that not one drop of wine was served. It seemed that no one missed it; there was abundance of enthusiasm without it."

Mr. B. G. A. Moynihan, the noted English surgeon, has a fad for collecting old mahogany furniture. He has a very fine mahogany table that experts say is a real Chippendale. Thomas Chippendale, the noted English cabinetmaker, flourished about 1750. He was left-handed and the experts have, on examination, found that this table of Mr. Moynihan's was carved by a left-handed man. Therefore Chippendale.

Dr. Walter P. Keene has resigned as assistant surgeon of the Soldiers' Home, Santa Monica, to enter private practice at Sawtelle. Dr. Keene is a

graduate of Georgetown University, served as staff officer during the campaign in Porto Rico, as surgeon to the District of Columbia National Guard and in the U. S. Navy. He is a member of District of Columbia Medical Association and of the National Geographic Society.

Dogs carry infection as was clearly proved at Constantinople in 1865, when a single animal, entering the city from an infected district, started a cholera epidemic that killed more than 50,000 people. The dog, a valuable chow, was taken into his house by a dragoman, and a few hours later he and all his family were stricken down with the complaint, which spread thence to all parts of the city, even the Sultan's palace being invaded.

One of the most prominent physicians of Pasadena writes: "Editor Southern California Practitioner: I wish to express my appreciation of the Southern California Practitioner. It has grown to be a very excellent journal—worthy of its position in Southern California. I was particularly pleased with the last number which included your excellent paper on national health matters. I am enclosing the amount of my subscription renewal. Sincerely yours."

France in 1907 shows 19,000 more deaths than births and a decrease in the number of births of 33,000 over 1906. There are in France 524,486 places where alcoholic drinks are sold, i. e., a bar for every twenty male inhabitants of the French Republic. As one writer states recently, "The corroding liquors have burned out the Frenchman's courage. Population decreases. Infanticide augments. The male brings nothing home to his companion and she cannot nourish children. He has deserted her for alcohol."

Dr. A. Halden Jones, graduate of the College of Medicine of the University of Southern California, class of 1908, is

taking graduate work in the Ogden Graduate School of Science, Chicago. His major subject will be Bacteriology; his minors, Physiology, Chemistry and Pharmacology. The work is primarily as a fitting for teaching, but also as credits for a Ph.D. from the University of Chicago. The Ogden School opened June 13th and the summer quarter continues about three months after which the Doctor will return to Los Angeles.

Dr. W. S. Fowler of Bakersfield, Cal., differs with the writer of the editorial on Scopolarum that appeared in the Tune issue of the Southern California PRACTITIONER. He says "in many cases, several hundred, I have seen or know of no fatalities from its use, yet I have seen the respiration drop to two per minute and its use is not contraindicated by age, infants and the aged taking it equally well. Small doses are perfectly safe and when followed by chloroform, much less of the volatile anesthetic is necessary and many always use one dose as a preliminary to chloroform anesthesia."

"I first used Scopolamine (I don't think it was Merck's, one package of 75 grs. was lost on the Steamer Ems which sunk in the German Ocean, imported for me by Sargent & Co. of Chicago) and afterward Scopolamine of Merck's when he wrote that this drug was identical with Hyoscine, but he charged 30 cents a grain for one and 60 cents a grain for the other. The first experiments in anthesia were made on my own body, my wife cutting as I directed while I was asleep. I have actually seen no deaths from its use although one case here was assumed to have been caused by it. Have used it in a babe 18 months old and in several cases of over 80 years; am using less drug per dose now than formerly, most of my experiments having been made with 1-50 gr. Hyoscine and 1-4 gr. morphine injected at 8, repeated at 10 and at 11, operating at 11:30, and in many cases 1-25 with 1-4 morphine, and have used at high as 1-6 gr. Hyoscine at a dose, all hyperdermatically. Am now using 1-100 or 1-200 H. with 1-6 or 1-12 M. and find results about as good, for every case requiring anaesthetic, always use one dose even if use chloroform for the anaesthetic."

Dr. M. L. Loomis and Dr. Albert W. Moore have been appointed examining physicians for the Civil Service Commission of Los Angeles. They succeed Dr. T. B. Gerson, who has most creditably held this position for the last four years. Dr. Loomis graduated from the College of Medicine of the Universitty of Southern California in the class of 1900 and is one of the prominent young practitioners of this city. Dr. Moore graduated from the College of Medicine of the University of Southern California in the class of 1904 and from the Universitty of Pennsylvania in the class of 1905. He is a member of the Board of Health of the city of Los Angeles.

Dr. John Weinzirl of the University of Washington, Seattle, concludes a paper on "The Action of a High Dry Climate in the Cure of Tuberculosis:" To summarize: The action of a high dry climate in the cure of tuberculosis, consists essentially in the stimulation afforded to the body by the daily variation in temperature; altitude, dryness, and sunlight are important mainly as being instrumental in causing this daily variation. These factors by themselves exercise a certain hygienic influence, but the temperature change produces a true physiological reaction. Incidentally the variation in temperature affords cool nights with accompanying refreshing sleep. Together, these two factors afford the patient a vantage ground from which to wage a more successful combat against the forces of the disease.

The San Diego Union of June 18 says: "Dr. D. Gochenauer was elected president of the Agnew Hospital Association Tuesday night. Dr. Gochenauer, who is at present manager of the Angelus Hospital in Los Angeles, will leave that institution in January to make his permanent home in San Diego, taking active control over his interests here. He declares that San Diego is more prosperous than many of his sister cities in Southern California."

The San Diego Tribune of the same date says: "Dr. Gochenauer left San Diego five months ago to assume the management of the Angelus Hospital in Los Angeles. 'You don't know how good it seems to come back to San Diego even for a couple of days,' said he this morning. 'I know now how to sympathize with some of those returning to San Diego in the past with stories of homesickness. I am certainly home sick. While the change has been of material benefit to my health, it is my intention to come back to San Diego to reside as soon as my contract with the Angelus Hospital expires. That will not be until next January, however."

The office of Surgeon-General Walter Wyman (Marine Hospital Service) in Washington is absolutely free of ostentation, superciliousness and red-tape. From the distinguished chief through the whole department the motto is evidently courtesy, hardwork and intelligence. Just before the Fourth this year Surgeon-General Wyman sent the following to all the newspapers in the United States:

"In addition to giving a preventive dose of tetanus antitoxin, it should be an invariable procedure to lay open all Fourth of July wounds. All foreign matter, dead or badly injured flesh, should be removed, an anesthetic being used to prevent pain and proper measures taken to limit bleeding.

"After the wound has been thoroughly cleaned it should be swabbed out with a carbolic solution of at least 25 per cent., followed by a washing with 95 per cent. alcohol to prevent further action of the acid.

"After the wound has been cauterized in this way it should be thoroughly washed out with a bichloride of mercury solution, packed with gauze and dressed every day."

The Fourth Annual Commencement of the College of Physicians and Surgeons of Los Angeles was held in Cumnock Hall, June 26th. Dr. J. H. Seymour made the opening address, Dr. William Elmer Carter gave the valedictory, Dr. James P. Booth (the young man eloquent) made the chief address, and Dr. Chas. W. Bryson, the Dean of the College, conferred the degrees. The following composed the graduating class: William Elmer Carter, Charles Edward Schwartz, Edwin Hines Hall, Charles Ernest Holgate, Ralph Louis Byron, Paul Alfred Opp, Glover Brown Wilcox, Allyn Claude Magee, William Oliver Davis, Thomas James Cummings. On the evening of June 27th the class were the guests of the faculty at a banquet at the Angeles Hotel. Dr. Chas. W. Bryson acted as toastmaster. As a prelude to the introduction of the speakers he made a few remarks on "The Exploratory Incision." Dr. James T. Fisher responded to "The Honest Doctor" and Dr. Chas. E. Zerfling to "Waiting for patients." Dr. Edward Douglas Jones spoke on "Our Alumni" and Dr. Charles Edward Schwartz, one of the graduates, on "Why I Became an M. D." "Our Graduates," by Dr. Paul A. Adams; "The College of Physicians and Surgeons," by Dr. Warren Nichols Horton, and the "Doctor's Wife," by Dr. Orville O. Witherbee, concluded the speeches.

BOOK REVIEWS

MEDICAL LECTURES AND APHORISMS.

By Samuel Gee, M.D., F. R. P., etc., etc.
London: Hodder & Stoughton. New York:
Oxford University Press. Flexible Cloth,
308 pages.

In this book, Gee in most entertaining style presents not only an interesting series of lectures on various diseases but several of unusual worth on such topics as Sects in Medicine and the Conflict of Medicine with the Smallpox. His clinical aphorisms on the more important diseases are valuable not only because of the knowledge they contain but also because of their charming diction. The book is one well worth having.

GLIMPSES OF MEDICAL EUROPE. By Ralph L. Thompson, M.D., Professor of Pathology St. Louis University School of Medicine. Illustrated from Photographs and from Drawings by Tom Jones. 12 mo., 236 pages. Cloth, \$2,00 net. J. B. Lippincott Company, Publishers, Philadelphia.

First—we express our appreciation of the breezy, picturesque style of the binding, illustration and typography. The very appearance of the book is seductive.

The text is correspondingly unique, beginning: "Whatever city may be the objective point for medical study abroad, the important thing is to choose the most indirect route for reaching it." This volume will prove to any physician or medical student who is going to Vienna, Berlin, Paris or London. The author recommends all American physicians visiting Berlin to attend the Saturday evening meeting, at the Heidelberger Restaurant, of the Anglo-American Medical Association.

PRACTICAL LIFE INSURANCE EXAMINA-TIONS. With a chapter on the Insurance of Substandard Lives. By Murray Elliott Ramsey, M.D. Philadelphia and London: J. B. Lippincott Company, 1908.

As the author well states, the position of an examiner for a life insurance company is one of tremendous responsibil-

ity. Upon the character of the risks accepted depends the mortality rate of the company, and on the mortality rate in turn, much of the company's prosperity rests. To know when to say yes and when to write no, is by no means an easy task in the examination of insurance applicants. It is one thing to know about a disease in its general aspects and another to gauge the present and future course of vital functions. Ramsey has presented precisely the kind of knowledge needed by medical men who do insurance work. His book represents the experience of years and will be found of great value by the large number of practitioners who are called on in their work as examiners to safeguard the interests of their respective companies.

THE SEXUAL QUESTION. A Scientific Psychological, Hygienic and Sociological Study for the Cultured Classes. By August Forel, M.D., Ph.D., LL.D. Formerly Professor of Psychiatry at and Director of the Insane Asylum at Zurich, Switzerland. English adaptation by C. F. Marshall, M.D., F. R. C. S.; Late Assistant Surgeon to the Hospital for Diseases of the Skin, London. Illustrated. Cloth, 536 pages. New York: Rebman Company. Price. \$5.00.

Forel in this treatise presents a review of the Sexual Question from the philosophical standpoint and his views show not only a wide general knowledge of the subject but much original thinking.

There is little in the whole domain of sexual physiology and pathology which the author has not touched upon and his presentation of the subject matter is in no way salacious. It is a scientific study of one of the most vital subjects and facts in existence and Forel's views on the various aspects of the problem should be of wide interest. The work is handsomely printed and bound and should commend itself to those who desire to read a scientific discussion of the Sexual Question.

PERSONAL HYGIENE In Tropical and Semi-tropical Countries. A popular manual written for the use of Foreigners residing in the Philippines, Cuba and other portions of the Tropics. By Isaac Williams Brewer, M.D., Member of the American Society of Tropical Medicine. Philadelphia: F. A. Davis Company, 1908. Price, \$1.00. For sale by Fowler Brothers, 543 South Broadway, Los Angeles.

This book is full of good points for those going to the tropics and also could be read with advantage by any person who intends traveling.

WOMAN. A Treatise on the Normal and Pathological Emotions of Feminine Love. By Bernard S. Galmey, M.D., Gynecologist to the Yorkville Hospital, etc. For Physicians and Students of Medicine and Jurisprudence. Second Enlarged Edition. 258 pages. Practitioners Publishing Company, New York. Price, \$3.00.

An interesting volume containing much information not found in ordinary text-books. The subject is dealt with from the standpoint of anatomy, physiology, pathology, hygiene, psychology and morality, and on the whole is well written. It will no doubt appeal to many as a much-needed book.

SOCIETY MEETINGS

SEVENTEENTH ANNUAL MEET-ING OF ARIZONA MEDICAL ASSOCIATION.

The seventeenth annual convention of the Arizona Medical Association was held at Tucson, Ariz., April 27 and 28, 1908.

The President, A. R. Hickman of Douglass, being absent on account of illness, the meeting was called to order by the First Vice-President, A. W. Olcott of Tucson, in the Elks' Hall, at 10 o'clock a.m.

The address of welcome was given by J. W. Coleman of Tucson, on behalf of the Pima County Medical Society.

E. B. Ketcherside responded on behalf of the association.

The "Annual Essay" was read by John W. Flinn of Prescott.

L. P. Kaul of Jerome then read a paper on the "Scarlet Fever Epidemic at Jerome," which was discussed by Ketcherside of Yuma, Rodger of Tucson, Moeur of Tempe, Gustetter of Nogales, Coleman of Tucson, Flinn of Prescott, Ide of Tucson, and Kaul of Jerome.

A committee on Necrology was appointed, consisting of Drs. Palmer, Rodger and Flinn.

The meeting then adjourned to meet at 2 p.m.

2 p.m.—A most interesting paper by Dr. Granville MacGowan of Los Angeles, Cal., on "Some Unusual Phases of Tuberculosis of the Urinary Bladder," was read by the author, and discussed by Mark A. Rodger of Tucson.

E. B. Ketcherside of Yuma then read a paper on "Doctors of the Past" which was discussed by W. V. Whirmore and others.

The meeting then adjourned till II a.m., April 28, to allow the members an opportunity to visit the Whitmore Hospital and Sanatorium, where a surgical clinic was given by Mark A. Rodger, of Tucson.

The annual banquet was held at Martin's, Monday evening, April 27.

11 a.m., April 28—Meeting called to order and officers for the year elected, as follows: President, A. W. Olcott of Tucson; First Vice-President, J. W. Foss of Phoenix; Second Vice-President, C. E. Yount of Prescott; Third Vice-President, A. L. Gustetter of Nogales; Secretary, John W. Flinn of Prescott; Treasurer, E. B. Ketcherside of Yuma; Councillors, O. E. Plath of Phoenix, John E. Bacon of Tombstone. and J. K. McDonnell of Crown King; Essavist, J. W. Coleman of Tucson; Committee on Public Policy and Legislation, J. W. Coleman, C. E. Yount and John W. Foss.

Place of next meeting, Prescott, third Wednesday and Thursday of May, 1909. Meeting adjourned until 1 p.m.

I p.m.—Meeting called to order by Third Vice-President L. P. Kaul.

Francis H. Redewill of Phoenix read a paper on "Eclampsia Taxima, and Uraemia of Pregnancy," which was discussed by Yount, Ketcherside, Moeur and Redewill.

A paper on "Chronic Nephritis and Its Associated Lesions," by John W. Flinn and H. T. Southworth of Prescott, was read by Southworth, and discussed by Schnabel of Tucson, McDonnell of Crown King, Redewill and Flinn.

C. E. Yount of Prescott then read a paper on "Medical Legislation" which was discussed by Coleman of Tucson, Kaul of Jerome, R. F. Palmer of Mesa, Flinn of Prescott, and Yount.

A paper on "Sanitation" was then read by J. W. Coleman of Tucson, and discussed by Southworth of Prescott and MacGowan of Los Angeles.

A paper on "An Illustration of a Localized Traumatic Lesion of the Cortex" by W. Warner Watkins of Phoenix, was read by title, owing to the absence of Watkins.

A paper on "Tuberculosis" by E. C. Servin of Tucson, was read by the Secretary in the absence of Servin, and was discussed by Flinn of Prescott.

J. W. Foss of Phoenix read a short article on "Climatic Conditions in the Salt River Valley," which was discussed by Ketcherside, Yount, Moeur, Redewill and Foss.

It was moved, seconded, and carried, that this association elect a delegate from each county to the International Congress on Tuberculosis, to be held in Washington, in September.

The following delegates were elected: Yavapai, C. E. Yount; Pıma, Mark A. Rodger; Maricopa, John W. Foss; Yuma, E. B. Ketcherside; Santa Cruz, A. L. Gustetter; Cochise, John E. Bacon.

Granville MacGowan then addressed the association on the matter of placing the control of contagious diseases in all parts of the United States in the hands of the Marine Hospital Service.

It was then moved, seconded, and carried, that the President and Secretary of the Arizona Medical Association be authorized to correspond with the Secretary of the California Medical Association, to procure a copy of the resolution which was passed at the California Medical Association meeting, and that they be empowered to indorse a similar resolution and forward it to the Delegate in Congress, requesting him to co-operate with the California Senators in the passing of this bill.

A vote of thanks was tendered the outgoing officers of the association.

The Secretary was instructed to extend the thanks of the association to the Tucson Elks for the use of their hall.

A vote of thanks was tendered the Pima County Medical Society for their hospitality, and a standing vote of thanks to Granville MacGowan of Los Angeles, for his presence, and the paper which he presented.

The Secretary was instructed to extend a written invitation to John B. Murphy of Chicago to attend the next annual meeting of the association.

The meeting then adjourned.

Report of the Committee on Necrology.

WHEREAS: God in His infinite mercy has seen fit to remove from this sphere of active life, our worthy confreres, Drs. D. J. Brannen, A. J. Gould and J. S. Barrett,

Be It Resolved: That we express our sympathies for the bereaved families, and that we feel the loss of their fine attainments, and

Be It Further Resolved: That this resolution be spread upon the minutes, and that a copy of it be sent to the families of the deceased.

CALIFORNIA HOSPITAL NURSES ASSOCIATION

ALUMNAE NOTES.

Miss Stewart has taken a trip to Paso Robles.

Miss Barbour is assisting for the time in the Bard Memorial Hospital in Ventura.

Miss Cassarini and Miss Johnson have been visiting in Glendora for a few days.

Miss Margaret Waller returned to the Bard Memorial Hospital in Ventura, May 10, of which she is Superintendent, after the convention in San Francisco.

Miss Williamson, Assistant Superintendent of the California Hospital, went to San Francisco as a delegate from her own Alumnae, the New York Hospital. Miss Williamson did splendid work for this end of the State at the convention.

The California Hospital School for Nurses Alumnae was unanimously voted into the National Associated Alumnae at the San Francisco Convention. This school enters the National with two votes which is more than any other on the Coast with the exception of one in San Francisco, which also has two.

May 18 was the night of a most delightful excursion to San Pedro, followed by a launch ride. This was the annual entertainment given for the Seniors by the Junior Class. Through kindness of Miss Lampman and the Class of '09, the invitation was also extended to the members of the Alumnae, many of whom enjoyed this event with the others.

Miss Alma H. Green leaves for a visit to the mountains about May 15. Miss Green will be married some time in August to Mr. Victor H. Watkins. Mr. Watkins is a popular young attorney of this city while Miss Green is a graduate of the Class of '03 and has ever made a great success of her chosen

profession. She is one of the most popular members of our alumnae.

Miss Lampman, Superintendent of California Hospital, left for New York, June 8. She expects to be gone about two months. She will certainly receive a cordial welcome from her many friends here upon her return. Miss Williamson will be acting Superintendent during Miss Lampman's absence, while Miss Lickert of the Class of '08 will be her assistant.

The annual reunion and reception to the new graduates were given in Schermorhorn Inn, Tuesday evening, June 2. The program was opened with a piano solo by Miss Humphries of Sierra Madre. Miss Lillian M. Hilton gave the address of welcome which was most delightful. Miss Pitner gave two of her inimitable readings. She carried her audience with her through some of the most laughable "Ruggles" experiences and gave an amusing darky dialect piece entitled "Just Supposin' a Case." She received hearty encores to both. Mr. Cooper played two violin solos. Reports from the San Francisco convention were read by the delegates, Miss Waller and Mrs. E. R. Durbin.

These reports told of the new things in medicine and surgery as brought out in the convention; of the many branches of work now being taken up by the nurses, some of which are school and district nursing, almshouse and training school supervision, sanitary inspectors, health boards positions, charity board work of all kinds and many others beside the old lines of private and hospital work.

Miss Eva Johnson, the President of the Alumnae, presided with dignity.

A social time and refreshments were enjoyed after the program.

This was unanimously pronounced the most enjoyable reunion held thus far.

RICHMOND'S FASCINATION.

Dr. Walter Lindley of the California Hospital, who returned recently from he capital of Virginia, where he atended the National Conference of Charties and Correction, said, in an interiew:

"Richmond is one of the most delightul, restful cities in America. While he people dwell much on the past, yet hey are building and developing for he future.

"As the home of Patrick Henry and nany other Revolutionary heroes there is much to interest. 'Here,' said an old esident to me, 'is the house in which of the Lee lived. After Appomattox, he ode up here with six of his officers, dismounted, stood on that horse block, aluted his men, and, without saying a word, went in and closed the door. That was the end.'

"The exercises of the national confernce were held in St. Paul's Church. efferson Davis was worshiping in it on Sunday at just 12 o'clock, when an officer brought him a note from Gen. Lee, saying it was all over, and that he had better evacuate Richmond. Davis went out and others followed. The ector, without any explanation, closed he service and in absolute silence all lastily left. The booming of cannon old the story."

Dr. Lindley presided at a great meetng in this historic church on the evenng of May 11.

"It seemed strange," said he, "to have uch a meeting held in an Episcopal hurch. In the North the Episcopal hurch doors are closed to these general gatherings. Why the difference?

FAITHFUL TO HISTORY.

"There is one point in which the South surpasses us, and that is their aithfulness in teaching history. As an xample, a most delightful woman of a epresentative Richmond family said to ne: 'My father was in the Confederate

army and every day he tells my sixyear-old boy of the war, so that he never will forget it. Sometimes when we have friends in, I will say to my boy: 'Which is the prettiest flag?' He will get a little Confederate flag and wave it and say, 'This is the prettiest flag in the world!'

"In the North we are teaching a colorless history of the Civil War, while the South teaches a history that warms the blood of the children.

"At the opening meeting of the national conference, Hon. Claude A. Swanson, the able Governor of Virginia, made a notable welcoming speech, at the close of which the orchestra played 'Dixie.' The next to speak was a prominent New York attorney; when he had finished the orchestra played a waltz.

"A few days later, I said to a Richmond gentleman, with whom I had become well acquainted, an ex-Confederate soldier: 'At all great meetings in the North we have "Dixie" and everybody applauds as you do here, but we have the "Star Spangled Banner," also, and that is applauded, too. It would have been fine if you had given us the "Star Spangled Banner," after the New Yorker's speech.'

CURIOUS IGNORANCE.

"The comment was: 'There are many people here who do not know the tune. Some time ago a noted northern band came to Richmond. The musicians played "Dixie" and received great applause. They then started in on the "Star Spangled Banner," and, fearing it would not be recognized, I passed through the audience and spoke to as many friends as possible, and told them what it was, and that we must all applaud.'

"I came away from Richmond feeling that the negro was safe in the hands of the South. Everywhere I went the Southern people evinced an

affection for the decent negro that is unknown in the North. Many avenues of employment are open to him in the South from which he is barred in the North.

"The great temperance movement that is sweeping over the South is primarily an altruistic effort to remove from the negro the terrible temptation of the low groggery with its vile, adulterated fiery drinks.

LITTLE GIRLS AT POLLS.

"On Tuesday, May 12, en route from Washington to Richmond, I went through Fredericksburg, where three battles were fought, and six miles from the site of the battle of Chancellorsville stopped at Fredericksburg several minutes and learned that it was election day and that a vote was being taken on prohibition. Some little girls went by with white ribbons pinned on their dresses, singing. Each verse of the song ended, 'Our town is going dry.' The report in the next morning's papers showed that historic old Fredericksburg went dry all right.

"One interesting fact that was brought out at the Richmond conference in regard to the negro was that while the general death rate from tuberculosis in the United States had fallen since 1890 from 245 to each 100,000 of the white population to 145 to each 100,000 of population in 1906, the death rate of the

negro from tuberculosis was at least 500 to each 100,000.

THE HANDSOME POE.

"I was interested in the associations of Edgar A. Poe with Richmond. He was born in Boston, but when he was only a baby his mother died in Richmond while playing an engagement at the principal theater.

"Later he was considered a remarkably handsome man and he was a very pretty baby. A wealthy Richmond family adopted him. His first school days were in Richmond and he graduated at the University of Virginia. A movement is on foot to erect a monument in his memory.

"Many breastworks and other fortifications can still be seen around this beautiful city. A distinguished Richmond physician, who was in the Confederate army, pointed out an old camp-ground and said: 'That was where we were camped when I ate my first stewed rat.' Such an expression of disgust as came over this doctor's face as he told of this! The Confederates were certainly brought to dire straits, and criticising the way the Northern soldiers were ted in the Southern prisons we should first consider what the Southern soldiers had to eat at the same time."—From the Los Angeles Daily Times, June 3, 1908.

MISCELLANEOUS

HARD TRIALS OF JOHNNY JONES AND SISTER SUE.

BY FRANK BULLARD, M.D., LOS ANGELES.

Ι.

Hard trials for them two, Johnny Jones and his sister Sue, Tumbling restless in their cots, Twisting in a hundred knots. Eating apples gave them pain.
Who can make them well again?
Osteopath or Dr. Squills,
Eddyite or Little Pills,
Mental healer, other crook,
Family doctor, Harry Brook?
Hard trials for them two,
Johnny Jones and his sister Sue!

^{*}A poetical effusion written for the annual meeting of the Alumni Association of the College of Medicine, University of Southern California.

URETHRAL TRUISMS By SIR HENRY THOMPSON

"Now, there is nothing that a patient appreciates so much as the easy passing of an instrument. This is a disagreeable operation, and if you pass it more easily than other persons, you will probably retain your patient as long as he requires assistance of that kind. If your instrument stops by getting into the lacuna magna at the outset, he infers you to be a bungler, and perhaps will not ask your services again."—Diseases of the Urinary Organs (1879) p. 31.

"K-Y" LUBRICATING JELLY

Spells "perfection in catheter lubrication." ANTISEPTIC—WATER-OLUBLE—NON IRRITATING and contains NO formaldehyde.

It simplifies catheterization and helps to "retain your patient as long as e requires assistance of that kind."

In collapsible tubes.

Sample upon request.

VAN HORN & SAWTELL
NEW YORK, U.S.A. LONDON, ENG.

NEW YORK, U.S.A. 20 East 42nd Street and 31-33 High Holborn

H.

Hard trials for them two,
Johnny Jones and his sister Sue!
Mother wants a scientist.
Says to John at every twist:
"Pain is naught but mortal error;
All is due to but your terror;
All is God, and God is good;
Nothing bad is found in food.
If you but trust in Mother Eddy,
You are not sick, but well already.
Hard trials for them two,
Johnny Jones and his sister Sue!

III.

Hard trials for them two, Johnny Jones and his sister Sue! Brother cries in righteous wrath: "Why don't you get an osteopath? 'Tis plain to see it is his nerves Pressed on by some old spinal curves; His vertebrae are out of joint.

Just make them straight—that is the point."

And so they punched Johnny's bones Till loud and louder grew his groans. Hard trials for them two, Johnny Jones and his sister Sue!

IV.

Hard trials for them two,
Johnny Jones and his sister Sue!
A maiden aunt who studied Truth.
A mental healer sent the youth.
"Your pain," said he, "is in your mind;
One that could see if he were blind.
Just tell yourself you have no ache——"
Then Johnny said: "Get out, you fake.
My stomach hurts and not my thoughts."
What else he said were dash and dots.
Hard trials for them two,
Johnny Jones and his sister Sue!

V

Hard trials for them two,
Johnny Jones and his sister Sue!
Father took the Sunday Times,
Thought it was the worst of crimes
To employ one of the Trust
Any human ill to "bust";
So he regulars forsook
And called forthwith on Harry Brook.
"Go," cried Harry, "eat no salt,
Eat no breakfast. That's the fault."
Hard trials for them two,
Johnny Jones and his sister Sue!

VI.

Hard trials for them two, Johnny Jones and his sister Sue! As John was worse and "worser" feeling,

The next they tried was divine healing. Schaffer and Yoakum prayed a prayer, But still John's belly ache was there! And then those folks who talk with tongues

Prayed till they nigh wore out their lungs,

But Johnny's pain still grew and grew. The same thing happened to poor Sue. Hard trials for them two, Johnny Jones and his sister Sue!

VII.

Hard trials for them two,
Johnny Jones and his sister Sue!
Similia similibus curantur
Next comes in, in a dainty canter.
The thing that will the trouble grapple.
The millionth part of that same apple,
The selfsame dose for ev'ry hour
The griping pains will overpower.
But Johnny keeps on getting worse
And deems each remedy a curse.
Hard trials for them two,
Johnny Jones and his sister Sue!

VIII.

Hard trials for them two, Johnny Jones and his sister Sue! They send at length for Dr. Squills, Who drugs and doses him with pills And boluses as large as beans, But Johnny's stomach now careens. Turns turtle, fires his doses out And leaves him worse beyond a doubt. For Johnny now is really sick; Help must be had, and that right quick. Hard trials for them two, Johnny Jones and his sister Sue!

IX.

Hard trials for them two,
Johnny Jones and his sister Sue!
Tired at length of being made the fool,
John cried: "To the Buena Vista school
And bring me up a good internist
And get him quick; I am in earnest.
Or get a surgeon with a knife,
For as it is, I'm tired of life!
A doctor get, and get him quick.
Of quacks I'm tired and mighty sick."
Hard trials for them two,
Johnny Jones and his sister Sue!

X.

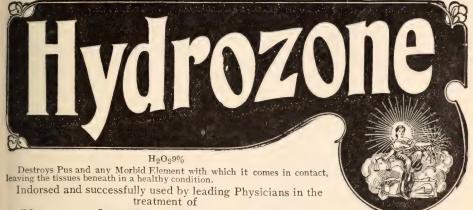
Hard trials for them two,
Johnny Jones and his sister Sue!
Their troubles now have just begun.
Thro' all the specialties they run.
To see the crowd indeed a sight is.
Lasher said "appendicitis,"
And Beckett said as he looked at Sue:
"An ovarectomy we must do!"
But Johnny thought, as he felt the colic,
That he was in for a fight, not a frolic.
Hard trials for them two,
Johnny Jones and his sister Sue!

XI.

Hard trials for them two,
Johnny Jones and his sister Sue!
Leonard, not to be mistaken,
Opsonic index next had taken
And made from apples sour and green
An anti-stomach-ache vaccine
Which she injected in their arms
To free them from the colic's harm.
But Johnny Jones and his sister Sue
No better got—alas, 'tis true!
Hard trials for them two,
Johnny Jones and his sister Sue!

XI.

Hard trials for them two, Johnny Jones and his sister Sue!



Diseases of the Nose, Throat and Chest.—
Open Sores.—Skin Diseases.—Inflammatory and Purulent Diseases of the Ear.—Diseases of the Genito Urinary Organs.—Inflammatory and Contagious Diseases of the Eyes, etc.

In order to prove the efficiency of HYDROZONE, I will end a **250.** bottle free

to any Physician upon receipt of ioc. to pay forwarding charges. Note.—A copy of the 18th edition of my book of 340 pages, on the "Rational Treatment of Diseases Characterized by the Presence of Pathogenic Germs," containing reprints of 210 unsolicited clinical reports, by leading contributors to Medical Literature, will be sent free to Physicians mentioning this journal.

Prepared only by

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

57-59 Prince Street, NEW YORK.

Fulton said: "My explanation's Intestinal intoxication."

He washed their stomachs, fed them with gruel,

And treated them in a way that's cruel. And then the doctor made his best Dimethyl-amido-azo-benzol test, And I tell you things did look blue For Johnny Jones and his sister Sue! Hard trials for them two, Johnny Jones and his sister Sue!

XIII.

Hard trials for them two,
Johnny Jones and his sister Sue!
Dr. Brainard and Ross Moore
Next must look the victims o'er.
John and Sue can get no rest;
Every reflex they must test,
And then with his ophthalmoscope
Ellis reads their horoscope.

From their bed they'll not arise Unless he should refract their eyes! Hard trials for them two, Johnny Jones and his sister Sue!

XIV.

Hard trials for them two,
Johnny Jones and his sister Sue!
Poor Johnny daily grew more thin,
And Sue was like him—naught but skin.
All the folks were filled with gloom,
Waiting for their certain doom.
At last one night, while all were sleeping,

Poor Johnny from his couch stole, creeping,

And found for him complete relief In a good strong meal on corn and beef. No trials for them two, Johnny Jones and his sister Sue!

AUTOSUGGESTION FOR IN-SOMNIA.

BY TOARDMAN REED, M.D.

Refreshing sleep, tired Nature's need, Spontaneous comes to those who heed

Her limits and unchanging laws. Organic ills may yield to skill, But other ails to strength of will;

Thus wakefulness from psychic cause. With eyelids closed and quiet mind, All cares and worries left behind,

You journey to the Land of Nod. Disturbing thoughts, whate'er their worth.

You banish at their very birth, And woo the jealous drowsy God.

Woolgathering stop by firm command; Ignore the schemes and projects grand With which the brain so often teems. Resolve to lose yourself in sleep. And in this thought your senses steep

Till waking fancies change to dreams.

Con o'er and o'er some soothing lay,

When slumber still remains away;
Then naught but pain success should hinder.

To such a mental concentration And soporific iteration

Old Morpheus wearied must surrender.

THE NEGRO'S OUTLOOK FOR HEALTH.

We have received the following from one of California's most prominent physicians:

Editor Southern California Practitioner: My Dear Doctors: Before me lies the June number of the Practitioner.

the June number of the Practitioner. Turning its pages, I read the article The Negro's Outlook for Health, by Beverly Norwood, D.D., and I wish to thank you for giving me the privilege of perusing these words, which expresses for me the most enlightening view of this subject which I have ever heard or read, either by physician or layman.

Following this, Dr. Lindley's painstaking paper adds weight to the value of this number of the PRACTITIONER.

Farther on, the editorial on Scopolamin morphin anesthesia is a courageous and well-timed blow at this dangerous and unscientific procedure. Why intelligent, high-minded, scientific men will toy with death by such chance methods, is beyond me to understand.

Thank you! June 17, 1908.

World's Wine Crop.—Consul James E. Dunning, of Milan, in a statement dated April 7, 1908, gives out the figures on the world's wine crop for last year as compiled by the Italian trade, thus:

Country	Gallons
United States	40,000,000
Italy	1,495,126,400
France	1,744,255,207
Germany	50,160,000
Austria	92,400,000
Hungary	\$1,400,000
Spain	464,640,000
Portugal	115,500,000
Switzerland	23,760,000
Russia	68,640,000
Mexico	500,000
Argentina	35,000,000
Chile	55,000,000
Brazil	8,000,000
Bolivia	650,000
Cape Colony	5,000,000
Corsica	6,654,800
Algeria	227,072,400
Tunis	7,920,000
Azores, Canaries, and Ma-	
deira	3,960,000
Luxemburg	2,772,000
Turkey*	39,600,000
Greece	32,000,000
Bulgaria	50,000,000
Servia	10,000,000
Roumania	68,740,000
Persia	450,000
Peru	2,400,000
Uruguay	2,300,000
Australia	7,000,000
Total	4,744,200,807

^{*}Including Cyprus.

THERAPEUTICAL HINTS

THE MOST FREQUENT HERNIA IN CHILDHOOD.

Dr. E. M. Carnes (Amer. Journal Med. Science) reports observations of 3,300 cases, concluding the most common hernia in children is median ventral hernia above the umbilicus. frequency of this form increases from birth, to attain its maximum in the second year, then it falls rapidly and is rarely seen in adults. Because of this fact he argues that it is an acquired character and cures itself. Of all hernias examined by him in infants, 87.1 per cent. were of the median ventral variety alone or of this variety associated with other hernias. This variety of hernia is of especial importance as bearing upon the etiology of hernia in general, and therefore upon the treatment of hernia in children especially. His studies lead him to believe that congenital hernia in children is less common than acquired hernia. Hernia in infants is often due to an increase of intra-abdominal pressure due to gas formation, and the rational treatment would seem to be not surgical, but medical. Stop the intestinal fermentation and the hernia will cure itself.

THE ABDOMINAL BELT IN WHOOPING COUGH.

Kilmer, in the Archives of Pediatrics, states that 95 per cent. of cases of whooping cough can be benefited by the application of an abdominal belt made of linen, with a strip of silk elastic webbing two inches wide inserted in either side. The belt should be about three inches shorter than the circumference of the body at the umbilicus, and is laced at the back. The width is four or five inches for infants, up to eight inches for children. The tightness of the belt is adjusted to the degree of coughing and vomiting. When first applied the

constriction should be slight; but if the coughing and vomiting are not sufficiently controlled, the belt is tightened.

PROLAPSE OF THE RECTUM IN CHILDREN.

P. L. Mummery (Brit. Med. Journal, 1907, ii, 812) states that rectal prolapse. is a comparatively common affection among children. Of 50 consecutive cases he has found 22 to be among males, 28 among females; their ages varied from three months to five years. Of causes, diarrhoea was the commonest precursor of prolapse, occurring in 14 of the cases; 13 of the patients had adenoids; 3 had worms; in 3 the condition followed whooping cough, and in 3 measles; 2 had rectal polyps, I prostatic inflammation, and I a rectal stricture; in I case it was blamed on constipation; stone in the bladder or phymosis was not present in any of the cases. General weakness and malnutrition, therefore, caused the larger number, local causes being present in but 7. Absorption of fat is a result of malnutrition, and the removal of this fat from the rectum predisposes to prolapse. The exciting cause he considers to be the unnatural method of defecation adopted in civilized countries. Pathological prolapse is unknown among animals and uncivilized races. The natural position for defecation is the squatting one, in which the glutei and perineal muscles are firmly contracted, thus supporting the levator ani and tightening the pelvic fascia; the coccyx is firmly fixed in the squatting position, the lower part of the rectum thus forming a considerable angle, while in the sitting posture the rectum is almost a straight tube. The obliquity of the false pelvis in children also predisposes to prolapse. In treatment the child's general health and nutrition must be improved. The stools should be passed in the squatting position into a shallow pan. This cures prolapse as a rule at once. Local causes, whether rectal or otherwise, must be attended to.

Nocturnal Incontinence of Urine in Children.—Add eight drops of belladonna and eight drops of tinct. nux vomica to eight ounces of sammetto. Of this, one-half to one teaspoonful is given before each meal and at bedtime.

The Pacific Surgical Manufacturing Company have commodious new stores at 316 and 318 West Fifth street between Broadway and Hill street.

Dysmenorrhea.—Whether a congestive, neuralgic or membranous type of Dysmenorrhea, Hayden's Viburnum Compound acts most promptly and effectively. If administered a week in advance of the flow, and its use is continued in slightly reduced doses throughout the period, the excruciating pains and cramps will be relieved.

Gastralgia.—Papine in teaspoonful doses, given every two or three hours, will promptly relieve the severe pain associated with gastralgia. The effect of one dose is often prolonged for five or six hours. Malakial Neuralgia.—Papine in one or two teaspoonfuls doses every three hours. Peritonitis.—Begin with one teaspoonful every two hours, increasing the dose to three and four teaspoonfuls every three hours.

The safest and simplest treatment for freckles is the use of lemon juice. Take a fine camel's-hair brush and, dipping it into the lemon juice, touch the freckles carefully night and morning until they begin to disappear. If the freckles are too thick to touch separately, apply the lemon juice with a soft, fine cloth. But this is very apt to burn the skin unless a little glycerin be added to neutralize the effect. It is best to dilute the gly-

cerin with rose-water and add enough lemon juice to make the face smart.

Pain is often present for months after a fracture of the leg, especially in elderly people. This is mainly due to the formation of the callus and needs no operative interference. Of course, a subacute osteomyelitis must be kept in mind.

The Buffalo Medical Journal in appreciative review of Pottenger's Tuberculosis, says: "Every public sanitarian, as well as clinician, should give this work careful study."

A doctor, now eminent, was at one time serving as interne in one of the Philadelphia hospitals, as well as holding his own with a coterie of rather gay friends. On a certain morning, the physician awoke to find that he had sadly overslept. Sleepily donning his attire, he hastened to the hospital and soon a stalwart young Irishman claimed his attention. "Well, my man, what seems to be your trouble this morning?" inquired the doctor, concealing a yawn, and taking the patient by the hand to examine his pulse. "Faith, sor, it's all in me breathin', doctor. I can't git me breath at all, at all." "The pulse is normal, Pat, but let me examine the lung action a moment," replied the doctor, kneeling beside the cot and laving his head on the Irishman's chest, "Now let me hear you talk," he continued, closing his eyes and listening attentively for sounds of pulmonary congestion. A moment of silence. "What will I be sayin', doctor," finally asked the patient. "Oh, say anything; count one, two, three and up, that way," murmured the physician, drowsily. "Wan, two, three, fure, five, six." When the young doctor, with a start, opened his eyes, Pat was continuing weakly, "tin hundred and sixty-nine, tin hundred and sivinity, tin hundred an' sivinity-wan."



VOL. XXIII.

Los Angeles, August, 1908.

No. 8.

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THE COUNTY MEDICAL SOCIETY.*

BY JOHN W. FLINN, M.D., PRESCOTT, ARIZ.

The choice of a subject for the annual essay is, by no means, the least of the difficulties which the essayist has to encounter.

In previous years, it has been rather the custom to discuss some scientific subject which was especially engaging the attention of the profession at that time. This is an excellent custom and should be encouraged.

This year, however, your essayist has seen fit to turn aside from the well-trodden paths of custom and to choose rather a common, homely, every-day subject. His reason for doing so is that, in his opinion, this is the *one*, of all subjects, which most vitally concerns the members of the medical profession of Arizona today—the County Medical Society.

This is a strong statement, gentlemen! There are many burning questions before the profession today! But your essayist speaks advisedly when he says that, in his opinion, the County Medical Society transcends them all in importance; and he is here to defend his opinion.

The County Medical Society is of supreme importance because it is the unit of organization in the medical profession of the United States; and organization and combination are the keystones of success in the present age of the world.

What, you will ask, can organization and combination do? The answer to this question is found in the reply to another query, "what have organization and combination done in other fields of work?" What have they done in the field of capital in the past twenty-five years? What have they accomplished in the world of labor in the past fifteen years? Why has the United States of America made such amazing progress in the past quarter of a century? Why is she the greatest industrial country in the world today? Principally because her people have learned to organize and combine.

And, gentlemen, what organization

and combination of energy have done in the field of business they can and will do in the profession of medicine. Why already, sir, even with the incomplete and crude attempts at organization and combination that have been made in the profession, the greatest financial institutions of this countrythe institutions the ramifications of whose influence are more far-reaching than that of any others-the great lifeinsurance companies have, with one exception, been literally compelled to pay their examining physicians a fair fee This feat. for insurance examinations. great as it is, perhaps is the least of all the benefits which medical organization has already bestowed on the profession.

Gentlemen, show me a medical profession well organized, and I will show you a power, which in twenty-five years will shake the strongholds of disease to their very foundation stones.

The County Medical Society is of importance first, and principally, because it enables the medical men in each community to become acquainted.

Some one has said, "the man I don't like is the man I don't know." In the past, medical men have been dependent largely on the gossip of disgruntled, fault-finding and often lying patients for material from which to form their opinions of their professional confreres in the community in which they practiced. Is it any wonder they formed poor opinions of one another? Are you surprised that unfriendliness, jealousy and often open hostility have been the commonest sentiments among members of the profession in all parts of the country? How often has one seen two medical men practicing in a small town; good men, both of them; men who knew their work and whose dominant instincts prompted them to be decent, bickering and fighting like two overgrown school boys! And why? Simply because they had never met on neutral ground, and had a chance to become acquainted. Because their intercourse had always been through the medium of third parties who were, in reality, unfriendly to both of them. Every encouragement was given to show their worst sides to each other, and no provision whatever was made for helping them to develop their good points and to stultify and cover up their bad ones.

It may be safely axiomated that no one man has a monopoly of all the virtues, any more than are all the vices combined in any one. Indeed, we are all very much on a level in this respect. The man of marked virtues is the man who dives headlong into vice; and the man who never makes a slip is not likely to accomplish any very great moral reform. Let us be broadminded enough to look at all the sides of a man's character, and then we will not be very apt to condemn many.

But, you say, Doctor A. is a pure son-of-a-gun and I know it! Very well. The strong probabilities are that he thinks the same of you, and he is just as likely to be right as you are. Get together and talk the matter over, and perhaps you will find out that you are both wrong.

"There is so much that is bad in the best of us, and so much that is good in the worst of us, that it doesn't behoove any of us to say anything about the rest of us."

Hark back to your college days for a Weren't the boys in your class the best ever? Do you ever expect to meet their like again? What was true of your class was also true of all other classes in your college, if you could only have known them as well. What was true of your college is true of all other colleges. Where, let me ask you, are all those good fel-Practicing medicine in lows today? your town and mine. And there is just as much and more good in them today than there was twenty years ago, although it is perhaps a little harder to dig down to it. Stop your miserable bickering; there is plenty work for all of us and to spare! Join your County Medical Society and get well acquainted with your competitors, and you will find in your town what we have already found in ours, that we have the best fellows in America practicing side by side with us; men whom it is a pleasure to meet on the street or in the consulting-room; men who if you treat them right will go you one better; men whose friendship it is worth working years to gain. When you have become well acquainted with them compare them with the members of the other professions in your community and you will find they are head and shoulders above the others, in professional efficiency, in general decency and in goodfellowship.

Gentlemen of the medical profession of Arizona, this is the kind of men we are asking you to meet and get acquainted with; and if you wish to do it, dive headlong into the work of your medical society!

The County Medical Society is of importance, secondly, because it leads to co-operation among the members of the medical profession. Co-operation, as its derivation implies, means simply working together; what in ball parlance is called team work. The man who tries to practice medicine alone is making a great mistake. The field is so large and the interests involved are so varied and so many that no one man can keep in touch with them all without constant help from his fellows.

The opportunities for team work are almost innumerable.

(a) Men can co-operate in raising the level of professional decency in their community. Where men meet regularly in the County Medical Society you do not find them cutting one another's throats, in their practice. Men insensibly get to respect one another's rights, which after all is everything

there is to medical ethics. Professional decency, like religion, is an intangible quantity which is best understood and practiced by those who think and speak least about it. It is simply wonderful the effect one or two decent men in a society can have in raising the tone of the profession by their quiet unspoken influence for decency. Herein lies one of the very greatest of the benefits of the medical society, that the less decent men in the community gradually and insensibly imbibe the views of their more decent confreres and the tone of the profession as a whole is immeasurably raised. Men get so they are ashamed not to treat their confreres decently.

Have you a man in your community who is inclined to stoop to what is low and unseemly in medical practice? Get him into your society; surround him with decent influences; heap coals of fire on his head, and he will soon get to realize that it is up to him to treat you like a man, and nineteen times out of twenty he will soon act accordingly.

Men can co-operate in encouraging healthful consultations. you have seen and heard a man in your society for some time, you get to appreciate his strong points; you begin to realize just in what particular lines he is your superior. For, if you are honest and observant you are bound to find points of superiority to yourself in every man you meet. Make careful mental notes of these points, and when you have a case which calls for some particular kind of skill have in consultation the man who has shown himself strong on that point in your society discussions, and see what a help he will be to you.

If you have not already formed the consultation habit begin to cultivate it at once, and it will surprise you to learn how much more pleasant and satisfactory it will make your practice, and how much better work you will do.

(c) Men can co-operate in raising

fees and insisting on a fair remuneration for medical services. This is an advantage which is so self-evident and appeals so closely to all that not much need be said on it. It is certainly not a very inspiring spectacle to see men cutting fees like cheap peddlers; offering their wares to the public at whatever figure may be offered for them. Reference has already been made to what has been accomplished in raising fees for insurance examinations. can and will be extended to other fees. Of course there will always be the small-souled, narrow-minded man who is so short-sighted as to think he will benefit himself by cutting fees quietly. However, if you will but keep at the good work even he will be forced to see his mistake in time; and even if he should not, his not playing the game is no excuse for your "playing off-side." Let the right-thinking men in the profession insist on reasonable fees for their services and the others will soon be forced to realize their mistake.

(d) Men can co-operate in stamping out criminal operations in their community. The following resolutions passed by the Yavapai County Medical Society are self-explanatory and have certainly had a very beneficial effect.

At the special meeting of May 7, 1906, the following resolutions were unanimously adopted, and the secretary instructed to send a copy to each member of the society.

"Whereas, it is apparent that quite a number of criminal abortions have been performed in Prescott during the past few months, and

"Whereas, such practice is contrary to the spirit of our profession and the constitution of our society,

"Therefore be it resolved:

- "(1) That any member of this society who shall persist in this criminal work shall be promptly expelled from membership, and
- "(2) That this society will, in the future, do all in its power to have

criminal abortionists punished by law,

"(3) That the secretary be instructed to mail a copy of the resolutions to each member of the society."

At the regular meeting of the society held December 14, 1907, the following resolutions were unanimously adopted:

"Whereas, any medical practitioner is very liable to be unjustly blamed for inducing abortion and miscarriage, and

"Whereas, it is the sense of this society that no effort should be spared to keep the name of all physicians clean,

"Therefore be it resolved:

"That the members of this society agree to refuse to attend a case of abortion or miscarriage without a consultant; it being understood that in case of extreme hemorrhage or other condition dangerous to life, such temporary measures shall be adopted as are necessary to maintain life until a consultant be secured."

(e) Men can co-operate in securing public health legislation and in having competent medical men appointed as health officers.

There is much need of medical legislation in our Territory, but as another member of this association is to present a paper on this subject, no further reference will be made to it, except to emphasize the great need of a Territorial law on compulsory notification and fumigation in all cases of tuberculosis.

A well-appointed County Medical Society should be able to agree as to which of its members are most suitable for public medical offices and unanimously recommend their appointment to the proper legislative bodies in their county.

(3) The County Medical Society is of importance thirdly, because it affords its members opportunity for framing and carrying out a systematic course of medical study.

Once a society has been properly or-

ganized this becomes its most important function, and one which it *must* fulfill if it is to be a permanently useful organization. Moreover, just as far as any county society is able to successfully carry on a course of medical study, just so far will it become a permanent and mighty power for the improvement of its members.

Men will soon lose their first enthusiasm in matters medical if you do not continuously provide them with some tangible work. By the way, herein lies the secret of success in medical society management: "Give each member something to do all the time." In society matters as elsewhere, work is the great leaven that leavens the whole lump. Osler, in his masterly farewell address to the medical men of America says, that Unity, Peace and Concord are what are especially to be desired and sought after in our profession. In another of his inimitable addresses he refers to work as being "the masterword in medicine," and gentlemen, this master-word will do more than anything else to bring about that greatlyto-be-desired condition of Unity, Peace and Concord in our societies and in the profession at large. Have you a man in your society who is habitually disgruntled? Have you one who is careless in attending the meetings? there a member who is lacking in interest and enthusiasm? Set them to work! Keep them doing something for the society! And the only logical permanent work for any medical society is systematic medical study.

Our Journal of the American Medical Association is publishing a skeleton course of study for county medical societies. It is probably too elaborate for the county societies of this Territory. At first, at least, discuss the commoner affections, as colds, acute abscess, a normal case of labor, repair of the

perineum, earache, clap or chancre. Later you will get to more pretentious subjects and, in time, elaborate a complete course of study which will be especially suitable to your men and their conditions.

Let no man object to being assigned a subject which is not of especial interest to him. If he is rusty on the subject, all the more reason why he should get it up; and really the ideal way to swat up any subject is to write a paper on it. Make up your programs at least a month in advance to give each member an opportunity to familiarize himself with the subject, so as to be in a position to appreciate and derive benefit from the paper of the evening. For, if you expect to get any considerable benefit from the course of study, every man must read up each subject before attending the meeting. A very excellent method is for men to combine into groups of two or three and meet privately and go over the work of the next meeting; each reading alternately and the others listening.

Gentlemen, can any one of you estimate the benefits to be derived from such a course of study? Think for a moment of the work that could be gotten up in one year! Why, Sir, if every County Medical Society in Arizona were to get down in real earnest to such study, in five years our men would stand in the very front ranks of the medical profession of America.

Gentlemen, these matters are worthy of your most serious consideration. Think deeply on them. Take the ideas home with you and sleep on them, and you will be forced to the conclusion that the needs of our profession demand that this association make the most strenuous efforts to enlist the active co-operation of every medical man in Arizona in this great and most important work.

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A CASE OF CONGENITAL DISLOCATION OF THE HIP JOINT TREATED BY OPEN OPERATION.*

BY W. W. RICHARDSON, M.D., LOS ANGELES, CAL.,

PROFESSOR OF ANATOMY, COLLEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA.

I am presenting to you a boy upon whom I operated on February 20, twelve weeks ago, at the Children's Hospital, for a congenital dislocation of the right hip, by the Hoffa-Lorenz open method. When he entered the hospital he presented the typical signs of congenital dislocation of the hip, of the third type. With the thigh extended the head of the femur was located above and lateral to the acetabulum nearly as high as the anterior superior spine of the ilium, as shown in the X-ray picture taken by Dr. Soiland.

Upon flexion of the thigh, especially with adduction and inward rotation, the head could be plainly felt upon the dorsum ilii. Measurement from the anterior superior spine of the ilium to the medial malleolus showed 1½ in. shortening of the affected limb, and the tip of the trochanter major stood well above Nelaton's line.

There was slight atrophy of the musculature of the thigh, and especially of the glutei, but no shortening of the extremity as measured from the tip of the trochanter major to the malleolus. Movements of the limb were free with the exception of abduction. He walked and ran about without pain but with a very marked limp.

Operation: Without preliminary treatment nor extension, an incision was made about ½ inch in front of the tip of the trochanter and running downward about 3 inches.

The fascia lata was divided and the M. Gluleus Med. and Min. exposed. These muscles were drawn upward with

retractors revealing the joint capsule. The capsule was then opened and the head of the femur exposed, lying in a compartment of the capsule, above and behind the acetabulum.

The ligamentum teres was much elongated, broadened and stretched tightly over the head when it was rotated outward. It was divided with scissors close to the head, and the head then easily dislocated, giving access to the acetabulum.

The acetabulum was very shallow and contracted. It was in fact located only by its rim of cartilage and by the ligamentum teres, there being no socket present. The head of the femur was but slightly deformed, being somewhat flattened upon its inner and lower surface. With scissors the ligamentum teres was removed from its attachment. Without great difficulty the acetabulum was then enlarged and deepened by means of an ordinary strong bone curette. Shavings of cartilage and bone being easily cut out without great force, a deep socket was thus readily scoped out until it was sufficiently deep to retain the head in position. Reduction was easily accomplished by manipulation and the head entered the socket nearly to the trochanter and retained its position during free manipulations. No tenotomy nor muscle division was necessary. The wound was closed by sutures leaving exit for a cigarette drain and the pelvis and thigh enclosed in a plaster cast, with the thigh in slight abduction and inward rotation. The drain was removed after

^{*}Read with presentation of the patient at a meeting of the Los Angeles County Medical Association, May 8, 1908.

forty-eight hours through a fenestrum cut in the cast and the wound healed primarily.

The cast was removed after three weeks and massage and gentle movements begun, the cast being replaced at night for two weeks further.

He has been walking without support for about four weeks and is steadily improving in his gait.

As you may see there is now no shortening by careful measurement, the position of the limb is good, and although movement of the hip is very limited, there is no firm ankylosis and movement is becoming freer daily. He still walks with a decided limp, but it is much less when he is unconscious of observation.

The X-ray picture taken a few days ago shows that anatomical reposition is perfect, and I think we may expect with continued use and gymnastics a perfect result.

As to the desirability of correcting these deformities, there can be no question. There is no tendency to spontaneous improvement, but rather to increasing deformity, and a child so affected is seriously handicapped in the struggle for existence.

Orthopedic apparatus has little to offer for their relief, and the only hope of permanently bettering their condition is by operative interference. Operation offers the hope of anatomical reposition of the head into its acetabulum, and restoration of function to the joint.

Of operative procedures we have two main types. The bloodless method originated by the French orthopoedists, especially by Pravaz in Lyons, and later in 1887 revised by Paci of Pisa, was brought to its present popularity and completeness by Lorenz of Wien. That in the vast majority of cases actual re-

duction of the dislocation can be obtained by the bloodless method, in competent hands, has been proven, but the cases in which the head remains permanently within the acetabulum seem to be few. In the great majority of cases the head in time leaves its socket and comes to lie anteriorly below the anterior superior spine of the ilium, i.e., a transposition of the head is substituted for its original position. The functional result, however, in successful cases leaves little to be desired, and function is the goal of treatment. This method, however, has its limitations in the age of the patient, and Hoffa states that beyond the sixth year a good result is rare, and Lorenz advises against its use after the age of ten. In children approaching this age limit, or in cases in which the bloodless reduction has failed. the open method offers a means of reduction unaccompanied with great danger, and allowing an accurate and positive reduction, with greater probability of permanency.

It is accompanied with far less traumatism as any one who has witnessed both methods will testify.

No muscles need be cut as a rule, but if muscular contractions prevents reduction, the clean cut of a tenotome is far less traumatising than the blunt tearing of the bloodless operation.

The after treatment is much simpler by the open method as the long fixation is not only unnecessary but undesirable, and the after treatment of massage and gymnastics begins as soon as the wound is well healed. Hoffa advises this method only between the ages of 3 and 10.

Beyond the latter age he performs a resection of the head of the femur in double luxation, and in single dislocation an oblique osteotomy.

REPORT OF THE SCARLET FEVER EPIDEMIC IN JEROME, ARIZ., 1907.*

BY L. P. KAULL, M.D., JEROME, ARIZ.

February 24, 1907, I was called to see a boy whose mother said he had scarlet fever. Her diagnosis was correct, as the epidemic which followed will testify. Upon investigation, to learn the source of the infection, I found an Austrian child in the same neighborhood who had been sick of scarlet fever for several days, and the parents would not notify the Health Officer, nor call a doctor, as they knew that would mean quarantine. An older brother of this child came from Austria ten days previously and, we presume, brought the infection to Jerome. The case in this family presented nothing of particular interest; the infection was mild and the child made an uneventful recovery with no complications except a mild arthritis. The child whom I first saw certainly became infected through this child, as they were together all the time. The case first mentioned presented a typical type of severe scarlet fever. There was much congestion in the throat from the first. and every other symptom was typical as described by our authorities. child grew progressively worse from the start, and on the second day, a dirty gravish membrane appeared in the tonsils, which, though adherent, could be removed without much difficulty and without any bleeding from the surface. The glandular involvment was greater in this case than in any other coming under my care during the whole epidemic; nor in any other case did I see so typical a pseudo-membrane as this case presented. At the time the membrane appeared, I gave this patient 2000 units of anti-diphtheretic serum and repeated it two days later, but seeing no effect whatever I did not repeat it the second time. This little fellow strug-

gled along until March 5, when he died. About eight hours before his death he became unable to swallow. Whether this was from a paralysis, or the extreme swelling I am unable to say. Every symptom of a severe scarlet fever was present in this case and I wish to call your particular attention to it, that you may clearly see the difference between the severe and the malignant The cases continued to appear, some mild, some severe, with three deaths, until the afternoon of May 5, when I was called to see a child but, being very busy I requested the parents to call another doctor and presumed they had done so, until about 9 o'clock that evening when I was again called to see the child, it having had no medical attention in the meantime. mother gave me the following history: About 10 o'clock that morning, this patient, six years old, with her brother, four years old, came in from their play complaining of being sick. Both had eaten bananas given them by a neighbor and both were vomiting the fruit. The mother, naturally supposing the fruit was bad, did not pay particular attention to the incident as the boy soon went off to sleep; but the little girl became more and more restless, very hot, and constantly wanting water. She remained in this condition until about 9 o'clock that night when I saw her and observed the following condition: Temp. 104° F., pulse 144, extremely restless, complained some of her throat which, on examination, I found reddened but not swollen, thirst was insatiable, no eruption, nor was there sign of any at any time. I ordered calomel and salts to clean out the intestinal tract, an ice cap to the head and cool enemas every two hours

^{*}Read before the Arizona Medical Association, April 27, 1908.

if necessary to control fever and restlessness during the night. I saw the child about nine the next morning; temp. 105° F., pulse 160, very restless and delirious, though she would reply rationally when spoken to. She continued in this condition until afternoon when she had a spasm and was never conscious afterward. Following the spasm the temperature rose rapidly, was 106°, pulse could not be counted. I put the child in a cold pack but it had little effect on the temperature. She died just thirty-eight hours after the first symptom of illness. These two cases I consider typical of their respective classes, and represent the point to which I called attention before. The boy who was taken sick at the same time the little girl was, presented an unusual type of this disease. The eruption was vesicular and was quite typical of chicken pox. I did not see this type again during the epidemic though Dr. Levengood reported one case which was fatal. The little boy in whom I saw this type of eruption made an uneventful recovery with no complications. During the evening before the little girl's death, I noticed the little baby of the family, in the kitchen eating very heartily and called his mother's attention to it as I was afraid he would eat too much: but he soon went to bed after playing around a little while and was not sick during the night, at least not up to 3 o'clock in the morning when I left. About seven in the morning, after having left there at three, I was called to come to the house at once as the baby had just had a spasm. I saw him within half an hour from the time he was taken sick and immediately used the stomach tube but digestion was complete as the stomach was empty. This little fellow-twenty months oldpresented practically identical symptoms to the sister who died the same morning he was taken sick. This little fellow was so prostrated from the first he could not talk, but the sight of a cup of water would bring both his little hands up in supplication. We gave both these children all the water they wanted but it did not quench their thirst in the least. This boy lived just twenty hours from the time he was taken sick. There was never a sign of eruption, no swelling of the throat or glands, nor other diagnostic signs. The parents of this child kindly gave me permission to do an autopsy on this body but the result was absolutely nega-Both my brother practitioners were out of town at this time and I had no consultation in either case, but it could have been but one thingmalignant scarlet fever. In the case first mentioned in this report I had plenty of time to use the remedies at my command, kept the bowels moving freely, used calcium sulphide, Tr. iron, strych., and whisky internally, in addition to the anti-diphtheretic serum mentioned above. Used ice bags to the throat to try and control the adenitis, had the throat sprayed hourly with equal parts of Dobell's sol, and peroxide of hydrogen, and twice a day personally made local applications of 20% nit. silver, but nothing I did seemed to influence the disease in any way. In the two cases of malignant scarlet fever the treatment was wholly supportive as there was no time for anything else. Dr. Levengood used anti-sterptococcic serum in subsequent cases but observed no beneficial result in any of them. The baby mentioned above was the last case of the malignant type coming under my care during the epidemic, but the other doctors had other cases which One little girl were invaribly fatal. was taken sick while eating supper. The father was working night shift so went on to his work saying they would call a doctor in the morning if the girl was no better. He was called from his work at five the next morning but the little one was dead before he reached home. No doctor saw this child, but the mother's description was identical to the symptoms exhibited by the other cases of malignant type.

Dr. Murrieta reports four cases of Ludwig's angina complicating scarlet fever during this epidemic, all of which were rapidly fatal. The cases presenting this complication were in very young patients who were overcome much more quickly than those who died without having this complication. He also reports one case in which the eruption was typical of measles and one in which the eruption on the breast was typical of measles, while on the back and extremities the eruption was typically scarlatinal. I have nothing new to offer in the way of treatment in these cases. We followed the lines of treatment advised in our text-books. I do not believe any treatment will avail in the malignant cases as the little ones are so quickly overwhelmed nothing can save them.

In the issue of the Journal A. M. A., January 4, 1908, there appeared an article on the prevention and treatment of scarlet fever by the injection of dead streptococci, from which I shall quote as it offers a line of treatment with which, I am sure, many of us are not at all familiar. The article is by Gabritschewsky and is as follows: Impressed with the idea that streptococci, if not the actual cause of scarlet fever, at least play a most significant role in its course, the author introduced the use of injections of dead streptococci for preventive as well as curative purposes in this disease. Before using the method in human being he studied the preparation of streptococcal vaccines, so called, on horses suffering from strangels, a disease caused by streptococci. Encouraged by the favorable results thus obtained, he proceeded to inject dead streptococci into human beings exposed to or suffering from scarlet fever. He used concentrated broth cultures of streptococci obtained from scarlet fever cases and killed by heating to 60° C. and then mixed with 5%

phenol. There were from .02 to .03 c.c. of bacterial substances and 0.5 c.c. was the ordinary dose for children from two to ten years old. If no undue reaction occurred, from one and one-half to two times this dose would be given in the course of the next seven to ten days. From observation on more than 700 children thus treated he concluded this method had a distinct preventive action, recommending its use on a larger scale in actual practice. Following the first injection there may appear a rash which more or less resembles the scarlatinal but which is not associated with scaling. In a few cases angina also occurred, and more rarely vomiting. These symptoms were interpreted in favor of the view that streptococci are the real cause of scarlet fever, but it is evident the angina may have developed quite independently of the injections. The author again emphasizes the fact that streptococci and streptococcal vaccines may cause scarlatinaform eruptions, which fact he holds to be strong evidence in favor of streptococcus being the specific cause of scarlet fever. Several other foreign investigators express their views in this article and I respectfully refer you to the original for their conclusions. My excuse for presenting these cases in this rather extended form is a desire to help us recognize this terrible disease early and thus protect the communities by early and vigorous quarantine. I am fully satisfied there is no more danger from infection in the malignant cases than in the mild ones; in fact, I believe there is less for in the former, the little ones are so quickly overwhelmed, the secretions that are more than likely responsible for the spread of the disease are not present, or if present, do not have the opportunity to be disseminated as in the milder cases where the sickness and convalesence cover a considerable period. Another point worthy of bringing out is, that during the epidemic there were two cases of a

mild nature that showed every other symptom of scarlet fever except the eruption. There were thirty-six cases reported to the Health Officer during this epidemic, with thirteen deaths, a mortality of 36%. And I firmly believe if we had taken the stringent means early, that we did later in the epidemic, the course would have been materially shortened. The conditions in Jerome are such as many of you have to contend with. A large percentage of our population are foreigners who have little respect for quarantine rules and will frequently use every means for deceit at their command to prevent a case coming to the attention of the health officers; and many of those whom you have every reason to expect would help you in every way possible, will take advantage of every opportunity to avoid quarantine, where the observance of it would mean the loss of a dollar or two to them. We found the Mexicans particularly troublesome in this respect, largely due, I think, to their natural solicitation for those of their race who are sick, and it was especially hard to keep the families isolated when one of the afflicted ones died. The offenses were not confined to any one nationality however. I do not think the conditions in Jerome are any different to those with which you all have to contend, who practice in mining towns. health department did not place guards at the very earliest cases in this epidemic as the people were intelligent and did what was asked of them, though I have since learned from later experience not to take chances on any cases in the more thickly populated parts of town

When the cases became more scattered over town, the health department placed guards at each and every case except where there were cases in houses close together and one guard could easily watch more than one house. During the course of the epidemic there were eighteen guards employed at a salary of \$4 per day, and to my mind it was a mighty good investment. suggestion as to the only proper way to prevent and control these epidemics is to place a guard at each and every case as it is brought to the attention of the health officers, have these guards sworn in as deputy peace officers with authority and instructions to make arrests for violation of the quarantine rules. If we could isolate the cases in a hospital for that purpose that, of course, would be the ideal way. But that is quite impossible in the large majority of our towns, hence I believe our only salvation lies in absolute quarantine, enforced by officers who should be on duty day and night.

I am indebted to Dr. A. J. Murrieta and Dr. H. W. Levengood for access to their notes on some of the cases.

DISCUSSION.

DR. KETCHERSIDE:—I like the paper very much and think the doctor was right in diagnosis. I don't think there is any doubt that it was malignant scarlet fever, and the results would doubtless have been the same under any course of treatment.

Scarlet fever is one of the most fatal diseases we have, and differs from the other eruptive fevers in that the temperature runs higher after the eruption appears than before, while in other eruptive fevers it declines. In scarlet fever the temperature runs higher than in any other fever, sometimes running as high as 107 or 108.

DR. RODGER:—Scarlet fever has given me considerable interest since I have been in this country. In almost every locality I know of, in the United States, scarlet fever is a great bugbear. In Arizona we are practically free from scarlet fever. Since I have been in Tucson, I have known of only three deaths from scarlet fever, one of these occurring in my own practice in a man thirty-three years old, and of the malignant type. Scarlet fever usually appears in a very mild form here. The Jerome epidemic shows what a different type of organism will do under different conditions.

DR. MOEUR:—In '93 I had quite an epidemic in Tempe. My two severest cases were aged 5 and 6 years. For treatment I gave both a large dose of calomel, ten grains; Pilo carpin and a hot mustard foot bath. Hot mustard bath and Pilo corpin worked beautifully on these two cases.

DR. COLEMAN:-It was about two years before the Jerome epidemic when we had another epidemic in Jerome of some thirty cases of scarlet fever, three of which were malignant and one died of neglect. Of two of the malignant cases that I saw in consultation, one had a temperature of 109, the other a temperature of 1101/2; no eruption in either case of malignant scarlet fever. Some years previous to that I had passed through another epidemic of scarlet fever in Colorado, and as I remember it now, two cases of it were malignant and died in the neighborhood of twenty-four to thirty-six hours. One reason why these cases of malignant scarlet fever are so interesting, is because there is practically nothing written about them in our text-books or in our journals; they seem to treat it with very little seriousness. It strikes like a bolt of lightning from a clear sky, and the man who sees it once will never forget it. Death comes within a few hours, before you get any action from any remedy of which I know. It seems to be a toxic form, and there is no time for neutralizing the toxin or eliminating it. Hope is offered from some form of antiserum.

I would like to urge upon all physicians to promptly report all the scarlet fever cases, irrespective of their being mild or malignant.

DR. GUSTETTER:—I had a case in Cincinnati, Ohio. The child at the time was three years old, and was taken with the fever; temperature 105 and all signs of scarlet fever, with rash covering entire body in about six hours. Typical scarlet fever and ran whole course in less than twenty hours.

DR.* FLINN:—From the standpoint of prevention at the time Dr. Kaull's cases occurred, there was no authorized health officer in the county. The health office now has orders from the Board of Supervisors to prevent all epidemics at whatever cost.

DR. IDE:—We have found that sometimes after a spray or douche through the nose, beneficial results would follow.

DR. KAULL:—I had been a witness of four deaths, three in one family. Up to that time, I had the same idea that Dr. Rodger had in regard to scarlet fever in Arizona. No doubt many of you gentlemen have seen a few cases of malignant scarlet fever. There are no symptoms in malignant scarlet fever.

A BRIEF GENERAL DISCOURSE ON ADENOIDS.*

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There exists in the normal individual a certain Lymphoid structure commonly known as Waldeyer's Schlündring, consisting of two lingual tonsils, and a third or pharyngeal tonsil, also commonly spoken of under the name of Luschka's tonsil. This latter or third tonsil is the one that concerns us in this paper.

Normally the third tonsil is distinguished only by a small accumulation of lymphoid tissue in the middle of the pharyngeal vault, or by a mere thickening of the mucous membrane in this region due to a slightly greater infiltration of lymphoid tissue in these parts. When the lymphoid tissue in this region or in the surrounding parts of the naso-pharynx becomes hypertrophic we have the condition known as Adenoids. These Adenoid masses may range in size from a mere thickening of certain areas, to a mass which

fills the entire naso-pharynx, and which may project into the choane quite a distance, press on the orifice of the eustachian tubes, and cause congestion of all the surrounding parts. When occurring in such masses the growth is usually distinctly furrowed and lobulated, bluish-red in color, and consists of a mass of lymphoid cells in a connective tissue reticulum, arranged in a nodular form. The connective tissue portion has a rich blood supply, and the whole mass being very friable, and the blood vessel walls poorly developed, a little rough handling usually causes considerable bleeding. The surface is covered with stratified columnar epithelium, which is deprived mostly of its cilia. As a rule there is more connective tissue relatively as the age of the patient advances, and this often determines what is known as the fibrous Adenoids so

^{*}Read before the Los Angeles County Medical Association, May 15, 1905

frequently removed from older children and adults.

Adenoids may thus be regarded as merely an over-growth of a normal histilogical element in the mucous membrane of this region, and when one considers the fact that this lymphoid tissue involves all of the nucosa to the very periosteum itself, it is easy to see why there are recurrences of these growths after the most careful and thorough removal.

That there is a very close anatomical relation between the lymph-channels of the naso-pharynx and those at the base of the brain, has been domesticated by Retzius, and this will probably explain why the patient is so often afflicted with mental apathy and physical defects, although some authorities claim that there is a certain toxic substance elaborated by the Adenoids which finds its way into the general circulation and thus affects the system in various ways to be recorded.

This condition may be present at any time of life from birth to old age. That it is frequently congenital is an established fact, and it is equally well known that they may develop in a child that was born without them. The most common age during which they are present ranges from four to ten years. Statistics show the frequency among children to range from one to four per cent. The growth will sometimes disappear spontaneously at about the age of puberty or later in life, though this is the exception. It is questionable whether Adenoids disappearing spontaneously, ever do so entirely. It is more probable that they atrophy in part, and the patient having had them continues to have them more or less all through life unless artificially removed.

No bacteria origin has yet been proven. Among the predisposing factors may be mentioned scrofula, syphilis, tuberculosis, rickets, diphtheria, and the so-called lymphoid constitution. While the disease cannot be said to be hereditary, we find nevertheless that there is a tendency in certain families for it to show itself in several generations. No race of people or any climate is exempt. It is, however, more frequently noted in damp and cold climates, than in warm, dry climates. Catarrhal conditions are said to act as predisposing causes. This, no doubt, is true, but I believe more frequently the Adenoids precede the catarrhal condition, and either produce or aggravate the latter.

The symptoms are many, though not infrequently the diagnosis can be made by merely a casual inspection of the child's face. If the Adenoids have been present a considerabde length of time and are comparatively large, the bridge of the nose is apt to be broad and flat, the lips thick, the patient dull and listless and probably bearing a look of degeneracy; the body is stunted, and the mouth open when breathing; a poor memory, sullen disposition, and headaches in any part of the head often exist. A very small mass of Adenoids. as well as large ones, may cause a general congestion of the mucous membrane of the upper respiratory tract, especially of the nasal passages, and a catarrhal condition of the mucous membrane, with or without a profuse, altered secretion from the nose, and post nasal space. There may be mouth breathing during sleep, grinding of the teeth, snoring, wheezing, interrupted, irregular or stertorous breathing, paroxysmal cough, asthmatic seizures, night terrors and enuresis, the latter existing in about ten to fifteen per cent. of all Adenoid cases according to some statisticians. The last two symptoms named are probably caused by overloading of the system with carbonic acid gas. The palatal vault is apt to be high and narrow as a result of negative air pressure. The chest is

often deformed on account of the strenuous efforts of the respiatory muscles to fill the chest with air, and the negative pressure within the chest during the time of attempted inspiration, the inflow of air being interrupted by the narrowing of the upper air passages. These changes present a varied form. There may be the typical pigeon breast; or there may result what is known as the tunnel breast, marked by a deep depression in the lower part of the sternum: frequently there is a linear depression outlining the attachment of the diaphragm, the ribs having been drawn in by the excessive action of this muscle; and some times there is presented the emphysematous chest.

As a rule the cervical lymph glands all over the body are increased in size. The blood shows a decrease in the amount of haemoglobin, and an increase in the number of white cells, especially the lymphocytes. In many cases there frequently exists what is known as the Status Lymphaticus. Where this condition exists there seems to be especial danger in chloroform narcosis. diagnosis can easily be made, and without mistake, by the use of the rhinoscopic mirror and the finger. In many patients the Adenoid masses can be distinctly made out with the mirror, which exhibits their exact location, size, and character. Where the Adenoids can not thus be seen on account of the intractability of the patient, or on account of the sensitiveness of the throat which will not tolerate the mirror, recourse should be had to digital examination, which will give the exact details one seeks. Many cases present marked subjective symptoms, yet the mirror fails to reveal the cause of the trouble. This is because of the fact that a smooth, hyperplastic membrane covering the entire pharyngeal vault presents nothing unusual to the sight. But let the finger be used and it will very quickly discover in the dark, the thick, soft, velvety mass which is unmistakable. The prognosis is nearly always good in the extreme if the case be properly handled, but should always be guarded if the case is neglected.

Mention has been made of malconditions arising from the pressure and congestion caused by Adenoids, but one has been purposely left to this paragraph on account of its importance. and that concerns the ears. There is no other such fertile cause of middleear abscess and mastoditis as these apparently innocent growths. While these diseases may be contracted by those not having Adenoids, they are far more common among those who have Adenoids-so common indeed that I examine all cases of acute and middleear abscess or mastoid inflammation for Adenoids as a routine course. Though the patient may not have suffered any apparent complications up to the present time, he will almost invariably develop an impairment of hearing as time progresses, that may prove very difficult to alleviate. Therefore, to avoid all danger of acute and chronic troubles, remove the growths at the earliest opportunity.

The treatment is but one, surgical. Among surgical procedures of any kind there are few that afford as prompt and brilliant results as the removal of Adenoids. The complete and skillful removal of these growths can only be accomplished under general anaesthesia, as a subsequent examination of patients who have been operated with and without a general anaesthetic will prove. As many fatalities have been reported with the use of chloroform I seldom use that drug myself at present. As a rule I make use of either ether or aneasthol, giving preference to the former drug wherever there are no contraindications. I have made frequent use in the past of ethylchloride and ethylbromide, but have dropped the use of these drugs almost entirely.

As there are so many opportunities for accidents of varous kinds I seldom perform the operation in either my office or in the patient's home, preferring in all cases to send them to the hospital, and allowing them as a rule to go home the day of the operation or the day following. With the patient in a recumbent position, as soon as the narcosis is complete, a gag is placed in the mouth, the tongue drawn out with a retractor, and with the fore-finger of the left hand as a guide, a Gottstein currette or one of its modifications is inserted in the pharyngeal vault and the area of the growth is thoroughly curretted until the finger can no longer detect any hyperplastic tissue. Many modifications of this procedure are practiced.

If the ears and nose have already become affected, appropriate local treatment should be installed as soon as the patient recovers from the operation, and continued till these parts have been restored to a normal condition. Most of these cases are also benefited by the administration of syrup ferrificed and cod-liver oil, and a temporary change of residence to a comparatively high and dry climate will also be found of much value.

THE PRESENT STATUS AND TREND OF PSYCHIATRY.*

BY CHARLES LEWIS ALLEN, M.D., LOS ANGELES, CAL.

While the name Psychiatry has been but comparatively recently accepted by the English-speaking world as designating a branch of medicine which has to do with diseases characterized by altered mentality, its adoption is coincident with an era of real progress. Wernicke, writing in 1900, stated that at that time psychiatry stood only at the point which the rest of medicine had reached one hundred years before. Since then the methods and habits of thought which have wrought for progress in medicine in general, have steadily forced their way among those having charge of the insane, and while it is yet at the rear, psychiatry is rapidly pushing forward to take its legitimate place as a branch of internal medicine. Considering the causes of its retarded development, probably the most important is the dominance which metaphysical conceptions with regard to mental phenomena have exerted over the medical profession in the past, and still hold over a large part of the laity. Mainly in virtue of these conceptions, a feeling of hopelessness with regard

to ever gaining any understanding of mental phenomena, and of indifference to the study and treatment of the insane was widely prevalent. Little or no instruction in psychiatry was given in the medical schools, and the unfortunate lunatics were abandoned very largely to the care of those unfitted by education and experience to make progress. Positions in State-controlled asylums were regarded mainly as political spoil and were too often filled by men who lacked the energy to succeed in private practice, so that a line of cleavage tended to separate asylum physicians from the mass of the profession, into a caste of their own, and to deprive them of the salutary stimulus which comes from association with the active spirits of the profession. Under these circumstances it is not remarkable that the better class of young physicians found little inducement for making this their life work. The past years have, however, brought many changes. In the enlargement of the curriculum, in most medical schools, psychiatry has found at least some recognition. In many

^{*}Read before the Los Angeles Medical Association, June 19, 1908.

States the care of the insane has been put under the control of a central governing body, a higher standard of attainments has been established as a prerequisite to appointment upon the staff of the institutions, no longer called asylums, but hospitals for the insane, and these positions have been put under civil service rules. Through the labors of an increasing number of energetic men, mainly of the younger generation, a knowledge of the methods followed abroad have been spread throughout the United States, and our institutions, no longer a reproach, tend to rival, and bid fair in time to surpass, in scientific and practical equipment, those of Germany long considered as models. In the best institutions, the appointment of a consulting staff from among physicians practicing the various specialties and the organization of the daily staff meeting, at which the new cases are presented and discussed, has been a powerful incentive to closer examination, better history-taking and sharper diagnosis, and as this practice extends to more institutions a change for the better in their personnel is bound to follow. An enormous amount of work has been done in the microscopical, chemical and bacteriological study of the secretions and excretions, and upon metabolism in the insane. Based upon the known effects of alcohol and other poisons, and upon certain facts brought out by the above methods of investigation, the idea of the autotoxic origin of many psychoses, has attained considerable vogue. However as to the nature of the poison or poisons at fault, whether they are due to perversion of internal secretions or not, and whence they originate, we have no definite information. On the whole while considerable has been done in sorting out, and in differentiating cause and effect, we can hardly claim to have made great prog-

ress in getting at the ultimate causes of insanity.

By the development of the newer impregnation and staining methods, to which we owe our knowledge of the finer anatomy of the nervous system. especially of the nerve cell and its processes, psychiatry has profited as well as neurology, and while as yet we have been hardly able to assign a special and distinct pathological anatomy any psychosis, barring general paresis, we have found out enough to justify the statement that insanity is a disease of the brain, particularly of the brain cortex. In acute cases which come to autopsy, changes in the finer structure of the nerve cells of the cortex are quite usually found, while in the chronic cases these changes have advanced to cell destruction, and degeneration of fibres, proliferation of neuroglia, thickening of the walls of the vessels and round cell deposit in their sheaths, occur in varying degree. A combination of these changes with thickening of the meninges gives the quite characteristic picture found in general paresis. In the acute insanities, however, we have so far been unable to connect the changes found with definite types. In the chronic forms, dissociation of ideas with memory defect is a common manifestation. This symptom would seem to point to interference with the association fibres or to disease of the centers. Now in general paresis which is specially characterized by memory defect and by faulty association of ideas, it has been shown that the regions in the frontal and parietal lobes in which Flechsig has located his great association centers, are specially liable to attack. In Korssakow's psychosis, which arising upon a toxic, usually an alcoholic basis, and often accompanied by peripheral neuritis, is characterized by disorientation and memory defect, changes in the cortex and in the central white matter of

the brain have been found, and the question of a central neuritis is now under discussion.

In the matter of diagnosis, we have not as yet been able to set up a standard of mental normality, and the old view that a man is sane or insane as related to himself, with the definition of insanity as a "perversion of the ego," is as true as ever. It is only recently that our colleagues, the psychologists, have been induced to take an interest in the abnormal mind; in fact, they, too, have long remained under the thrall of metaphysics, and heretofore few physicians have had training in psychology. To the few who have had, we are largely indebted for the differentiation of physiological and pathological psychology from the domain of metaphysics and their application to medicine. Seeing what has been accomplished by Kraepelin, Ziehen and others in Germany and by Janet, Toulouse and others of the French school, the pure psychologists have been stimulated to make comparative records, and we may reasonably hope in time, to have laid down, not an absolute but perhaps a relative standard of mental normality. As psychological investigations have been very time-consuming and have required expensive and complicated apparatus and special skill, the entry into every day use of these methods formerly seemed impossible, but the high value of certain simple tests, especially those calculated to prove orientation, ability to receive and retain impressions, and particularly the formation of associations, has been amply proven, and it has been shown that with no more complicated apparatus than a stop-watch, time measurements sufficiently accurate for clinical purposes can readily be made.

When Sommer in 1899 published his book on "Psychopathological Methods of Examination," with a distinct statement that his scheme was tentative only,

criticism considerable adverse aroused, but today systematic testing of the mental functions is coming more and more into vogue, and it is to be hoped that in time, at least an approximately uniform method, may be agreed upon. Especially has attention been directed to constructing lists of words calculated to bring out the method of forming associations and time required, and of late it has been suggested in some quarters, that by skillful selection of words used as stimuli and careful noting of the associations formed, time required and general demeanor of the subject, we may have a valuable means of securing corroborative evidence of guilt in some criminal cases. Probably the most advanced work in this line is that of Freud and of Jung and the Zurich school, by whom it is suggested that in psychical analysis we have not only a means of diagnosis, but by getting at the basis of the faulty ideas, we may also obtain suggestions as to a method of influencing the train of thought of the patient, to the end of their removal. It should be remarked, however, that their work has been done more especially upon hysterical and allied conditions. From all the above, the necessity for some psychological training upon the part of the psychiatrist, and its value to the general physician, is evident, and it is to be hoped that this branch may some day find recognition in the medical schools.

In the evolution of psychiatric methods, all the aids found useful in general medicine have been drawn upon, and every examination scheme now includes a thorough physical examination, with such chemical and microscopical researches as may seem indicated. Here allusion may be made to the cytological examination of the fluid obtained by lumbar puncture and to the serum diagnosis of general paresis tabes and cerebral syphilis, which have recently

come into use. With regard to the former the best perfected method seems to be that of Alzheimer, in which the cerebro-spinal fluid is mixed with alcohol, the resulting coagulum being condensed by placing the liquid in the tube of the centrifuge and revolving at high speed for an hour. The cells which the fluid contains are by this means carried down and caught in the coagulum. which is then hardened embedded in celloidin and cut like any piece of tissue. The results obtained are said to be quite constant, and to reveal in general paresis a great increase in number of cells, especially of the lymphocytes, with perhaps plasma cells, phagocytes and fatty granule cells, giving a picture sufficiently characteristic to turn the scale, in a case where diagnosis is doubtful.

Since syphilis is generally held to play an etiological role in tabes and general paresis, it has been thought that the blood serum and cerebro-spinal fluid of persons suffering from these diseases should contain a special luetic anti-body, hence that the serum diagnosis of syphilis should be applicable in doubtful cases. A great deal of work has been done on this subject, and the results seem to be positive, but a statement of the principles involved and a description of the technique would carry us beyond the limits of this paper. Since the method however is quite complicated, and requires special skill, it is hardly likely to enter into general use, unless it can be considerably simplified.

The classification of mental diseases still remains a stumbling block, but a notable advance has been made in getting away from the idea that every psychosis must at once be forced inside of certain boundary lines as one member of a hard and fast system. We have rather come to consider each case individually and to endeavor especially to look at it from the point of view of its evolution and probable outcome, whether in recovery, or in dementia.

This step in advance we owe especially to Kraepelin, whose views, founded on long experience, keen and careful observation and expressed in thorough clinical descriptions, have exercised an influence equaled by those of no other living authority. Especially is his group of dementia precox based upon the above principle, and while not final, his classification is being more and more widely accepted as furnishing at least a practical working basis. From a totally different standpoint proceeds Wernicke, whose keynote is morbid psychology as shown in symptoms, and whose groups are based upon similarity of such symptoms. For him a basal fact in many acute and in most chronic cases is the breaking up of normal association processes, or as he calls it, "sejunction." His clinical descriptions are keen and clear and his explanations of abnormal mental processes evince knowledge and deep thought.

His book is considered as one of the most original of recent works, and of real genius, but while full of interest and suggestion for the experienced, it is unsuitable for the general student and his classification does not seem likely to be largely adopted. Other writers as far as they are not influenced by Kraepelin, proceed mainly upon the old-established lines of classification. With regard to individual psychoses, under the influence of the Kraepelin school, the views of the profession in this country have of late been undergoing certain modifications. Since closer study has shown that patients seldom remain constantly either excited or depressed, but constant observation usually shows from time to time, at least a short phase of a condition opposite to the predominant one, we are much restricting our use of the terms mania and melancholia, and prefer to class these affective psychoses as the manic-depressive group of insanities. Under dementia precox, Kraepelin has placed a number of conditions—formerly

classed as acute dementia, confusion stupor, and acute paranoia—which have the common features of onset during the early period of life and tendency to permanent mental deterioration. The paranoia group has hence been much restricted, and the cases which strictly fulfill our present conceptions of this disease, are not among the most frequent forms of insanity.

The deliria, whether due to toxic causes or occurring in the course of febrile and infectious diseases, are not essentially different from each other, and though not popularly considered as constituting insanity, the border line between the two conditions is often imperceptible. They are divided into febrile and toxic deliria, and closely connected with this group are the exhaustion psychoses, the amentia of Meynert. Notable changes have occurred in current views with regard to those conditions forming the borderland of insanity. The term neurasthenia which has served as a convenient catch-all, bids fair to be much restricted, many of the cases being found on closer study to belong among the milder forms of insanity of comparatively favorable prognosis. These it is proposed to class together under the name of Psychesthenias, Phrenesthenias or Psychoneuroses, and among the more severe forms of this group would come the various obsessions, probias, etc. While our knowledge of the organic psychoses continues to enlarge, our views with regard to them have undergone no essential change of late. Though possibly statistics of actual cures show no great change, in the increased comfort and happiness of the insane, and in the development of human sympathy for these unfortunates, there has been an immense advance. No longer are they regarded as being possessed of devils, nor all of them as necessarily dangerous, but more humane treatment has shown that many, if not the majority,

are capable of appreciating kindness, and possess even gentle and lovable qualities, as far as these are not destroved by their faulty ideas with regard to the rest of the world. No longer are our asylums considered as jails, but rather as hospitals, for cure if possible, and when this result can no longer be hoped for, as refuges, where the patient is to be protected from himself, and from the dangers to which his irresponsibility would expose him in the outside world. With the development of the hospital idea, harsh measures of restraint have tended to disappear today, the no-restraint idea is firmly established, and while occasionally the good of the patient may require mechanical control, the generally milder demeanor. of both patients and attendants, the lessened feeling of injury upon the part of the former, and the absence of disagreeable souvenirs in those who recover, fully justify the banishment, or at least the great restriction, of the camisole, the restraint chair and the other mediaeval methods of persuasion. As unlike many other diseases, insanity runs its course in months and years instead of in days and weeks, the ill effects upon metabolism of long-continued exhibition of the strong sedative drugs, is readily apparent and their routine administration has, like restraint, been relegated to the past.

For them have been substituted the milder measures of hydrotherapy, especially the prolonged warm bath, the sedative effect of which is very great, and the necessary apparatus requiring no large outlay, though its application must of course be entrusted only to careful hands. The placing of new patients in an observation ward, in bed, and under constant supervision, emphasizes the hospital feature, and a ward properly arranged for this purpose, with suitable bathrooms attached, is considered an essential feature in the newer institutions. In this connection the placing of

female nurses in the male wards, especially in those devoted to the feeble and acutely ill, is reported upon favorably from many quarters and is in keeping with the hospital idea. The study of metabolism in the insane is receiving much attention and is of the greatest importance from the point of view of treatment. Disturbances of digestion and assimilation are pretty constant concomitants of insanity, and our chief effort must be to improve nutrition, most patients being much reduced and not showing mental improvement until they begin to gain in weight. In fact our task is mainly to prevent the patient injuring himself or others, to procure sleep, and to improve nutrition, depending for the rest upon the curative power of nature. A notable advance is the differentiation of acute from chronic incurable cases, and their sequestration in separate institutions, though in the United States, this distinction has been little recognized by our legislators. The average State hospital is so crowded with chronic patients, that it is impracticable to separate out the acute cases, and their treatment in consequence is seriously hampered. In Germany this separation is effected through the various Psychiatric Clinics, at which only the acute cases are handled and which are devoted to clinical instruction. From these clinics have come most important constributions to psychiatry, since being departments of the universities, the physicians connected with them are selected and promoted mainly on work accomplished, hence investigation by the assistants is much stimulated. Patients deemed unlikely to recover are transferred to the city and provincial custodial asylums, so that there is a constant movement, and students are able to see a large number of cases. In this country the most promising solution of this difficulty is the establishment of psychiatric wards in connection with general hospitals and this should readily be practicable in all cities of any size. A further needed reform is in reducing to a minimum the amount of red tape required to secure commitment and in avoiding as far as possible the publicity of a jury trial.

In any event entrance into a psychopathic hospital, or ward, should be made as easy as possible. This necessity has been recognized in the State of New York, where in connection with one of the large State hospitals some wards have been opened into which persons who are apprehensive as to their sanity may enter as freely as into a general hospital, and may remain under expert observation until the question is settled.

Of course the rights of the individual should in every way be safeguarded, but from long experience, the writer is of the opinion that very rarely indeed is a sane person confined in an institution for the insane, at any rate in a State hospital. The prognosis in insanity is much dependent upon prompt recognition and treatment and is not made more favorable by sojourn in a iail, until the authorities find it convenient to transport the unlucky lunatic to a State hospital. Apart from the fact that many persons who were formerly allowed to live their lives as cranks or village fools, are now recognized as mentally unsound and locked up, our strenuous methods of life seem to have produced both absolute and relative increase in insanity. In order to combat this scourge which places a greater burden upon the community than diseases which are promptly fatal, greater diffusion of knowledge with regard to the subject, among both physicians and laity is needed. Especially should we try to ascertain to what extent prophyllaxis is possible, and if, by the study of the mental and physical peculiarities of children we can determine what signs point to a predisposition to insanity, may we not hope by correcting faulty habits of mind and body and by change of environment, to avert this peril, at least in some cases? Along this path the writer feels convinced is to be found the greatest field for the psychiatry of the future, and in this connection may we not hope for aid from the development of psychical analysis and its natural corrallary psychical treatment? From the latter we can of course hope for nothing after organic changes in the brain have occurred, but in correcting bad habits and in strengthening resistance why may it not aid? Instead of leaving such a valuable adjunct in the hands of empirics, quacks and faddists. should we not as physicians, by careful study of the laws which underlie psychical phenomena, fit ourselves for the scientific application of this undoubted adjuvant?

PSYCHOTHERAPY.*

BY THOS. J. ORBISON, M.D., LOS ANGELES, CAL.

Dr. Allen has asked me to discuss his subject of this evening. I would like to confine myself to that part that has to do with Psychotherapy.

The wave of Psychotherapy that is going over the country is suggestive, fascinating and pathetic.

It is suggestive because it brings to our minds the many more or less similar waves of the past, and we cannot help wonder how much of this latest wave is will-o'-th'-wisp, how much real; how much of the real will last and how much of the lasting will be helpful and applicable to us as men trained to diagnose, treat and cure disease when possible.

As to the waves that have preceeded this, history teems with them succeeding each other among the Priesthood of old Egypt and handed on to that of the early Hebrews, a mixture of truth and error. They have taken various forms at different times and among different people: incantations; voodooism; fetishism; Pythonism of the Greeks; the love philtres and charms of the early middle ages, and so on down to our own era. All of them have been appeals to the imagination, most of them had to do. in part at least, with human health and all appealed to some one or more of the strongest of human emotions. That is the keynote idea: They were all appeals to the emotions.

The latest two waves of thought that have to do in part with health and in part with religion are Psychotherapy and the pseudonym Christian Science. Both have appeared synchronously, among similar classes of people. Each has its own primary forces and impulses that are interesting to the student. They have many points in common, and yet one is founded on Truth and will prevail, while the other is error and cannot endure.

There is an old Hebrew saying that there is no poison but has its antidote near it: maybe the wave of Psychotherapy will perform the role of antidote to the baleful, befuddling, grotesque mummer Quimbyism, alias Eddyism, alias Christian Science. A more scientific name would be Psychic Autointoxication!

In this much is this new wave suggestive. It is fascinating inasmuch as all of its class are fascinating, and especially so to us as up-to-date students of human bodies and minds.

A wide-spread interest seems to have been awakened in many parts of the world, and everybody seems to be asking, "What is this thing called Psycho-

^{*}Read before the Los Angeles County Medical Society, June 19, 1908.

therapy? What are these movements in various churches in which the physician joins forces with the clergy?" Is it any new thing? Has it any instruments of precision as have surgery and internal medicine? Is it a cult, a new school of drugless medicine, or is it only a branch of Psychiatry?

These are a few of the questions one hears on all sides. A few more are these: Who are its exponents? Has it enemies, and who are they?

These questions are much to the point and we must answer them satisfactorily.

These waves are pathetic because we know that many high hopes will bear no fruit except disappointment; that those who in their enthusiasm, claim too much will find even their widest limits do not include the Promised Land where human ills are not. Most of all are they pathetic because many of our profession, who will adopt the one or the other as a hobby, will see it thrown back on its haunches by the bit and bridle of scientific restraint and some will fall hard.

But this is the experience of all such waves of thought.

It is the part of wisdom for us who, more than the exponents of any other profession, seek wisdom for her own sake—it is for us, I say, to look carefully, at these latest two waves; to judge coolly and without emotion; to analyze impartially without fear of harming the truth or favoring our own feelings.

For in questions such as these it is invariably the appeals to the emotions that preclude any possibility of correct judgment.

Dr. Putnam, who with Rev. Dr. Worcester, is the head of the Boston movement, cast this in the teeth of the men who opposed that movement at the joint meeting of the Philadelphia and New York Nemological Societies

and the Boston Society of Psychiatry in November of last year.

As for the huge money-getting, pseudo religious and wholly unscientific wave of Eddvism: While I believe it will have but a short period of active and influential existence. I do believe that it will have had some good effects outside that of precipitating the religious beliefs of some of us into more crystaline shape—and one of these effects is beginning to be more and more insistently apparent. It is this: The question it has aroused in the public mind as to how much truth it contains, if any? And a second question likewise, Have the doctors anything to take its place?

The answer to the first question may or may not come from us, but the answer to the second must.

And we can give that answer: It is this: "Psychotherapy." Not the nostrum variety that smacks of charlatanism and hocus-pocus, but the healthy, scientific Psychotherapy that physicians have used for ages without blare of trumpet or clash of cymbol, and especially those who have been carefully trained along the lines of mental and nervous diseases. We as physicians are the men who will have to show what Psychotherapy is, chart its channels and lay down its boundaries and limitations. We must show how it is useful as a science and how its scientific application far out distances the application of such unscientific procedures as metalic rings, voodooism and Eddvism, and, in fine, how necessary it is that matters pertaining to the mind, body and health have been and of their nature must be best dealt with by the members of our profession. I think this is important and that now is the time to emphasize it.

What then do we mean by Phychotherapy? The answer is simple: It is any purely mental stimulus that we may use in the treatment of disease.

Is it confined to the Neurologist and Psychiatrist? By no means.

Only lately,—in the last volume of the Annals of Surgery—is an article on the psychic end results of major operations. It is a plea that more stress be laid by the surgeon upon the physic treatment of his patients with the end in view of obtaining better results in his work.

I do think that the most thickly populated field for this form of treatment is of necessity that of the Psychiatrist, and the Neurologist.

Psychotherapy has many exhibits just as Drugtherapy. Certain ones may be indicated for one patient that would be unwise for another. For example: Hypnotism is indicated in ambulatory antomatonism, or dual personality with a sub-conscious pathology, and contra-indicated in almost all other forms of nervous disease. In other words, Psychotherapy is a broad word and does not mean only one line of procedure. Under the broad idea of it come Hypnotism: Suggestions: the earlier methods of Freud and his later one called the analytical method; the Psycho-galvanic method of Peterson and Jung, which is an adaptation of the association affective method of Binswanger, Jung and others; the reeducation method of Duboise; the isolation methods of Mitchell; the persuasive method of Dana; the substitution methods of Mills and Sinkles, and so on. Each man has his own method of obtaining results in Psychotherapy just as many men have their own methods of the treatment of typhoid fever.

The personality of the physician looms up large in the discussion of this subject. But this only means that one man gets better results in his methods than another. For one reason, because one man knows more about it than another and can apply that knowledge better in a therapeutic sense than the

other—but this is a discussion for which we have not time or inclination except to give one example: Weir Mitchell is the peer of any man living when it comes to treatment of psychic disorders. His recourse to drugs is the same as that of any other man, but their uses of Psychotherapy differs; the difference is temperamental.

The correct application of Psychotherapy consists in the exhibition of the right mental stimulus at the right time and in the right way. For example: We have two hemiplegics. One is hysterical and the other organic. Let us say that we have diagnosed correctly. Now comes treatment. The organic is due, let us say, to cerebro spinal syphilis that is involving the membrane and has not as yet caused softening or other degenerative changes. The hysterical hemiplegia is found, let us say, in a business man who has lately passed through the stress and strain of a highpressure panic; or, to make the contrast greater, let us say that it has come upon a voung woman and we do not know the cause-nor does sne.

In the former case drugs alone may effect a cure—though it will be hastened and bettered and sweetened by the element of hope and enthusiastic encouragement—in other words by phychotherapy.

The latter case needs no drugs. Certain suggestive forms of electricity such as the faradic brush and the various forms of static sparks will be of the greatest assistance because they act psychotherapeutically, but the main element in the treatment will be the way in which we are able to substitute the normal for the abnormal idea.

In fact, in cases of hysteria and the other psychoses, ideas must be reduced to fractions and these must be gradually substituted.

This is the keystone of the arch. It can not be emphasized too much or repeated too often. I repeat that, in my

opinion and practice, the best results and lasting results have been obtained (in the Psychoses, Neucoses and grave forms of mental diseases) by the substitution of the normal ideas—sometimes in fractional doses—for the abnormal. It can be done.

That is Psychotherapy—and good therapy at that. As to the means employed by me personally, I will not go into that in detail at this time.

But in a general way what is the procedure? In the first place we must get at the real cause of the patient's disorder. This may or may not be known to the patient. Let us, for example, say that the young woman with the hysterical hemiplegia does not know the determining cause of the paralysis of half her body. How shall we find out?

In any one of various ways: We may try Freud's cathartic method. By this is meant that the patient is dominated by us mentally; she is made to feel that she must lend herself to our hunt for the cause of her trouble. This she will do if we know what we want her to do and are sure of our own ground and are able to make her know it. When in the right frame of mind we search her mind more carefully and systematically than she can do it herself. Step by step we follow the trail she has come, and more than likely it is plainly blazed. At last we come, as unerringly as Bishop could do by his "muscle reading," to the closed door of her memory. The trail has led us through the intricacies of a psychopathic individual's mind up to her subconscious self where is hidden, even from her conscious self, the secret. This we take hold of, show it to her, convict it and convince her. This is only the first step. From that point we can lead her with sureness along the road to mental clarity and, in very truth, "restore her soul."

This is not an hypothetical case. It comes directly out of a case book.

Now, suppose we take another tack and make, use of the Psycho-galvanic method of Peterson and Jung and note the fluctuations on the galvanometer that are traced during the response to certain words put by us to the patient. This is only a variation of the method that was tried by the eminent Professor of Psychology at Harvard upon a lately widely exploited criminal. The proceeding of this latter method would be to exhibit a series of words termed "stimulus words" to the patient—first having her in the proper mood.

Take by a split-second stop watch the time it takes her to say aloud what is the first word that comes into her mind in response to the test word. This is termed the association or "reaction word." The time between the "stimulus word" and the "reaction word" is termed the "reaction time." In making a series of 100 tests and comparing them we at once notice two things: First, that most of the reaction times correspond fairly well, whereas, secondly, certain ones are greatly prolonged.

I will give a series of test words that were used by Peterson and Jung in one of their cases and apply it to our own:

	Stimulus Word	Reaction Word.	Reaction Time.
Ι.	Head	Hair	1.4
2.	Green	Meadow	1.6
3.	Water	Deep	0.5
4.	Stick	Knife	1.6
5.	Long	Table	1.2
6.	Ship	Sink	3.4
7.	Ask	Answer	1.6
8.	Wool	Knit	1.6
9.	Spiteful	Friendly	1.4
IO.	Lake	Water	0.4
II.	Sick	Well	1.8
12.	Ink	Black	1.2
13.	Swim	Can Swim	3.8

An examination shows the reactions for the words water, lake, ship and swim were prolonged, and this gives us the clew.

Investigation shows that a love affair had brought depression which in turn had caused the patient to attempt suicide by drowning.

As an end result came the hemiplegia that our first examination of the patient showed us to be hysterical in character and not organic.

This case is curable. By what means or therapy? By Psychotherapy.

Again, the sub-conscious secret could have been exposed by hypnotising the patient just as hysterical blindness can be diagnosed by the same method. In the former case she will tell of what has occurred in her sub-consciousness as in the latter she would tell us what had been presented to her (supposedly) blind eye.

There is one Psychoneurosis or pathological condition of the mind in which Hypnotism is indicated. It is that peculiar condition we call Ambulatory Automatonism.

Take a case occurring in the family history of one of my own patients: A respectable, home-loving, middle-aged banker left his office one day, drew out what money he had in the bank and disappeared.

That man has never been heard of to this day—and that happened many years ago.

Without doubt he comes under the head of Ambulatory Automatonism and he may be alive to this day. Whether alive or not, what occurred was this: He lost his identity and a sub-conscious dual personality asserted itself and the memory of his former life was wiped out.

A year ago Dr. Hugh Patrick of Chicago published seven cases of this affection. By hypnotism he elicited all that had occurred to them throughout their sub-conscious state. Some men class them with Hysteria and some with Epilepsies. Confirmatory of the latter is my patient, the epileptic son of the errant banker.

I fear by this time you will have become bored by the length of this paper. But I have only touched upon a few of the points in the realm of Psychotherapy.

In conclusion I will say: We have here discussed Psychotherapy; have told what it is and have given some of its methods of application. The main points of the foregoing I take it are these:

Psychotherapy in its broadest sense is the treatment of disease by means of mental stimuli. Its present form has been evolved through the ages. Its main activity lies in the realm of mental and nervous diseases. There is bad and unscientific psychotherapy as well as appropriate and scientific psychotherapy, just as there is good and bad drug therapy. If any form of therapy leaves the patient worse than it finds him or sets up a vicious habit, whether mental or bodily, that therapy is bad. Just as morphia is bad when illy used so any form of psychotherapy is bad when illy used—for example: Hypnotism.

As for Eddyism and its like—they with Peruna belong to the proprietary and nostrum class and are vicious.

As for Hypnotism, it is applicable in a very restricted list of cases. Freud's method applies in certain forms of Hysteria especially. The methods of Peterson and Jung, Binswanger and others are mostly instruments of precision in diagnosis.

One great trouble about any discussion of Psychotherapy is due to the fact that when it is mentioned our ideas are so hazy. One thinks only of the movement in Boston engineered by Rev. Dr. Worcester and aided by Dr. Putnam; another has a hazy notion that Duboise is the originator of the new

movement and that his book may be consulted much as we would consult a chemistry text-book for a chemical formula.

The fact seems to be that men's minds are everywhere more on the alert for new ideas that may point toward truth and that this ages old idea that we have always used has been seized upon by the lay mind as well for elaboration.

We see evidences of this on all sides. Jelliffe and White translated Deboise's book at a psychological moment. It was as late as May, 1906, that the word "psychotherapy," as a heading,

occurred for the first time in the *Index Medicus*. I could give you the names of the leaders in Psychiatry and Neurology who have taken sides on the various phases of this subject, but they all practice it daily in their work, but some do not like to label it as do the Germans.

What will be the outcome of all this? The popular wave will recede below the horizon, but we will continue to practice it as long as we live. As for the proprietary and nostrum articles, they will abide as long as they are advertised—that is, as long as they pay.

HISTORY OF EARLY ANESTHESIA.

BY THEODORE G. DAVIS, M.D., LOS ANGELES, CAL.

During the last few years much interest has been awakened in drugs which may be used for anesthetic purposes, especially in the Hyoscin group of narcotics which, with morphin, are arequently used at the present time. I do not desire to tell of their dangers or extol their virtues, but to briefly present their early history.

Mandragora autumnalis, or Atropa Mandragora, the *Mandrake* of ancient writers (not Podophyllum, commonly called mandrake in this country, from the similarity of the fruit) was probably the first narcotic drug to be used, having been well known to the Babylonians 2,000 years B. C. They probably learned of its virtues from their shepherd ancestors.

It is even possible that eating the fruit of the mandragora "caused a deep sleep to fall upon Adam," during which Eve was created by rib resection; at least when he awakened *she was there*. The fruit of the mandrake was believed to possess aphrodisiac powers and was

probably the apple which so completely upturned the Garden of Eden.

The daughters of Laban—Rachel and Leah, whom Jacob took for wives—believed in the efficacy of mandrake, for it is related in Genesis xxx:14: "Rachel begged Leah for the mandrakes her son Reuben had gathered," stating later "she bore Jacob a son, whom she called Joseph."

Dioscorides (A. D. 100), who distinguished between the hypnotic and anesthetic properties of the drug, tells us "the Greeks learned of its use from the shepherds of the hills."

The fruit was eaten or the expressed juice taken by which the shepherds were made sleepy. They also prepared a wine by adding three pounds of the bark of the root of mandragora to a cadus (18 gallons) of sweet wine of which three cyathi (or small wine glasses) was given to those about to be cut or burned; by which they were thrown into a deep sleep and did not feel any pain.

The seed of the mandrake was "the

Morion of the Greeks," regarding which Pliny asserts: "A drachm taken in a draught, or in a cake as food, causes infatuation, takes away the use of reason; the person sleeps without sense in the position or attitude in which they ate it, for three or four hours afterward, and physicians use it when they have to resort to cutting or burning."

The wine was used by Lucinia, Goddess of the Obstetric Art, "who poured insensibility to pain down all of the limbs of a woman in the throes of labour." The early Egyptians employed mandragora as an anodyne and anesthetic, and from its power of exciting sexual desires, called it the "phallus of the field."

Theophrastus is the first writer on botany to mention mandragora, and the younger Pliny (A. D. 32-79) gives preference to the fresh leaves of which he says: "It is sufficient for some persons to seek sleep from the smell thereof; even cuttings and puncturings are not felt." Apuleius in his Liber de Herbis states: "If anyone have a limb mutilated, so that it must be burnt, cut or sawn, he may drink half an ounce of mandragora with wine, and while he sleeps the member may be cut off without pain or sense." Avicenna, the father of Arabian medicine, gives special direction as to the employment of mandragora, and Galen alludes to its power of paralyzing sensation. Paulus Aegineta states: "Its apples are narcotic when smelled, and their juice, if persisted in, will deprive a person of speech." According to Isidorus: "A wine of the bark is given to those about to undergo operations, that, being asleep, they feel no pain;" a statement which Serapion confirms. Celsus recommends a pillow of mandrake apples or leaves to induce sleep, much as hops are used today.

The poppy grew in Asia Minor, having been brought from India at an early period, and it is probable the virtues of opium were well known to the ancients. The Hindus used the fumes of burning

Indian hemp as an anesthetic and it is probable they knew of mandragora and of opium. As early as 977 B. C. they employed anesthetic drugs. Their "King Bhoja was trepanned while under their influence, the opening being closed by stitches and a healing balm applied." Hoa-Tho (A. D. 220-230), a Chinese physician, administered a preparation called Ma-yo, "God's gift," before performing painful operations—"they became insensible as if deprived of life." As the Chinese will not reveal the secrets of their tutors, we do not know its composition.

One of the early methods of producing anesthesia was by compresson of the carotids which, in the Greek and Russian, literally signifies the "artery of sleep;" this method is used by some nations today to induce anesthesia of short duration and is comparable to the asphyxia produced by nitrous oxide.

Pliny relates the use of a species of rock brought from Memphis, moistened with sour wine by which a local anesthesia was produced by the carbonic acid gas generated.

The Irish ever dreaded pain, and a Celtic manuscript of the twelfth century gives directions for a "potu oblivionus," which was similar if not identical with the "wine of the condemned," mentioned by the prophet Amos, ii-8. Several passages in the Talmud point to the practice of easing the pain of those sentenced to torture or to death by stupefying drugs. "If a man be led forth to death, he is given a cup of spiced wine to drink whereby his soul is wrapped in night," and again, "Give a stupefying drink to him that looseth his life and wine to those that carry bitterness in their hearts." The terrible agony of those crucified was eased by this wine given on a sponge or possibly by the anesthetic sponge.

The "sorrow easing drug" which, we are told in the fourth book of the Odyssey, Helen gave to Ulysses and his comrades and at the siege of Troy was

used by the Greek surgeons to assuage the pains of the wounded, was composed of the juices of the poppy, mandragora and henbane; a secret learned by Helen when in Egypt of Polydamnia, wife of Thone.

Bocaccio in his Decammeron, written in 1352, in the story of Dionius, alludes to the anesthetic liquid used by the surgeon Mazzeo della Montagua of Salerno, probably alluding to this anesthetic prepared from the recipe of Provost Nichols of the famous old School of Medicine at Salerno, "which would throw a person into a sleep as long as was necessary."

In the fifteenth century the production of insensibility to pain by inhaling the volatile principles of drugs was revived by Hugo of Lucca, a Tuscan physician. Theodoric, his son, who practiced surgery, in 1490 mentions a soporific, which "by smelling alone would put the patient to sleep on occasion of painful operations, so they did not suffer." The method of preparing the "spongia somnifera" or "sleeping sponge" of Hugo and Theodoric, Bodin, Cannappe and others, was unnecessarily complex, and the formula given by Reginald Scott in a work written in the sixteenth century simplified, yet contained the essentials: "Take of opium, mandragora bark and henbane equal parts; pound them and mix with water. A rag may be dipped in this and applied to the forehead and nostrils, when the person will fall asleep so deeply that you may do what you will with them. The same is excellent in brain fever, when if the patient can not sleep he will die."

The sponge was made "by placing a clean new sponge in the vessel and boiling it slowly as long as the sun doth shine on dogge days, and the sponge consumes it all. As often as there shall be need of it, place this sponge in hot water and let it be applied to the nostrils of him who is to be operated on until he has fallen asleep, and so let the surgery be performed." These juices

were also to be kept in a closed jar or vessel from which "the lid being removed and the medicament held to the nostril, its vapour attacking the citadel of the senses, the patient will be sunk into a deep sleep." (Porta, 1570.) William Bulleyn, who practised surgery in the reign of Henry VIII, describes a similar anesthetic, "which bringeth deep sleep, casteth a man into a trance, or deep terrible sleep, until he shall be cut for stone." To awaken the patient we are directed to "dip a sponge into vinegar and apply to the nostrils, or throw the juice of the foenngret into them; shortly he awakens."

Local anesthesia was produced by applying this substance to the parts to be cut "whereby the pain is deadened" and Bartholinus of Copenhagen (1678) states "local anesthesia is sometimes produced by freezing," foreshadowing the use of ethyl chloride and other like substances.

Gradually the use of mandragora and henbane fell into disuse and were forgotten. Opium became the principal drug used to relieve pain, under the teaching of Boerhaave and Van Swieten.

The use of narcotics to lessen or prevent the shock of surgical operations was suggested by Sassard, a surgeon of La Charite in Paris, as early as 1782. Owing to the danger attending the use of these drugs, and the uncertain results and painfulness of early surgery, but little advance occurred until the era of chemical anesthesia was awakened by Joseph Priestly, then residing in the quiet little town of Northumberland, Pennsylvania, who in 1776 suggested oxygen inhalations and later discovered and advised nitrous oxide gas.

Beddoes of England, assisted by Humphrey Davy, used nitrous oxide gas to relieve the pain of an aching tooth in 1799, and Davy in 1800 wrote: "As nitrous oxide seems capable of destroying physical pain, it may probably be used with advantage during surgical operations." In 1806 Woolcombe of

Plymouth, England, prescribed inhalation of ether to relieve a paroxysm of asthma occurring in his patient, Lady Martin. He noted "she became unconscious and insensible to the prick of a pin or to a blow." It seems extraordinary, almost incomprehensible that the value of ether as an anesthetic was not appreciated until thirty-nine years after this, but so it has always been: things of the greatest value to humanity are unobserved, lay dormant, or hidden to be resurrected by other and more practical men.

It remained for Colton in 1844 to res-

urrect anesthesia by nitrous oxide. While Long used ether successfully in 1842, due credit must be given Morton and Jackson-1846-for the presentation of ether anesthesia in a practical manner.

Chloroform, discovered by Guthrie, of Sackett's Harbor, New York, in 1831, and first used as an anesthetic by Ives, of New Haven, Conn., in 1832, owes its popularity, without doubt, to its successful introduction into obstetric practice by Simpson of Edinburgh, in 1847. It vet remained for Schneiderlin and Korff, in 1903, to revive anesthesia by the narcotics of long ago.

PERINEAL LACERATION.*

BY E. H. WILEY, M.D., LOS ANGELES, INSTRUCTOR IN ANATOMY, COLLEGE OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

Lacerations of the perineum like the poor are with us always and their repair is undertaken by all of us who have any surgical aspirations.

The perineum is defined as that peramidal body whose base is the skin from the fourshette anteriorally to the anallwel posteriorly and limited lateraly by the rami of the ischium. Its apex one to one and a half inches above the base being the point of approximation of the posterior vaginal and the anterior anal walls. The eitological factor in lacerations of this region is the passage of the foetus, which by over distension, rapid descent without dilatation, or discrepancy in size plows through the resisting outlet. The result is incomplete or complete laceration, a difference of degree only, depending on whether the sphincter ani escapes or is divided. Tears which do not properly belong to the perineum are included, as the injury often extends upward into one or both fornices beyond the apex of the pyramid. The problem presented in the repair of old lacerations differs materially from that of operation undertaken immediately. The latter

does not differ from a suture of any fresh wound and presents no particular difficulties, inasmuch as separation of the labia and retraction of the anterior wall exposes a plainly marked defect of tissue, which is readily approximated with silk worm gut or other sutures and which heals by primary intention with ordinary asepsis.

Even if complete with rupture of the sphincter and laceration of the anterior rectal wall the wound is easily converted into an incomplete laceration by insertion of sutures of cat gut or silk worm gut tied on the rectal side. The sphincter ends may be recognized and readily brought together by the same means but should be reinforced with a silk worm gut suture to insure coaptation until union is firm if cat gut has been used. The procedure necessary to restoration of function is so simple and so plainly indicated that it is particularized by no name.

The lacerations which have not been repaired at the time of their infliction fall into the surgeon's hands for relief from various disagreeable symptoms. The surgical means of relief which may

^{*}Read before the Los Angeles County Medical Association, May 21, 1908.

be undertaken are legion, i. e. to accomplish the same object as was readily obtained in fresh lacerations by simple approximation of well defined surfaces, we may undertake any one of several operations, each dignified by its author's name. Here as elsewhere, the multiplicity of operative methods leads us to suspect that none are entirely satisfactory.

Considering the anatomical arrangement of the region the explanation of the symptoms and the method of their relief, readily suggest themselves. The lower end of the vagina is more or less completely enveloped in a muscular sling, the lavator ani, arising from the circumference of the pelvis. Its two points of bony attachment, the body of the pubis anteriorly and the spines of the ischium latterly being connected by its origin from the white line representing the division of the pelvic fascia. At its insertion it encircles the vagina and rectum. Its anterior fibres are of particular importance as their contraction draws the vaginal outlet closely up under the pubic arch.

Removal of the skin and superficial facia reveals surrounding the outlet the sphincter vaginae, blending posteriorly with the sphincter ani superficialis and latterly with the superficial transversu perineii muscles which pass medianward from the ischial rami to the central tendonous point of the perineum where the above muscles converge. Removal of this layer and of the superficial layer reveals the deep transverse pereineal muscle, the analogue of the compressor urethrae in the male arising from the rami of the ischium and passing medianward to insert below into the perineum and above into the sides of the vagina. If now we remove the deep layer of the triangular ligament which is nothing more than the deep fascia which lines this particular portion of the pelvis, we come to the levator ani previously spoken of, which here invests the vaginal

outlet with horseshoe shaped loops, more or less parallel laterally. This brief resume takes no account of the connective tissues, fat, vessels, etc., which go to make up the body of the perineum.

The forces which traumatize the outlet of the partrurient canal may affect simply the perineal shelf, but usually the damage begins or ends high up. that is, there is a separation of the fibres of the levator ani posteriorly in combination with a division, usually median, of the transversus perineii muscles, one or both, together with the sphincter vaginae. In the absence of immediate repair the wound heals by granulation, and the new area is coverd with mucosa. Later follow the symptoms of relaxed vaginal outlet due to posterior displacement of the uterine axis, together with descent of varying degree, rectocele, cystocele, symptoms of congestion and if the rupture extends into the rectum the insufferable affliction of fecal incontenance. Characteristic of this condition is the backward displacement of the anus and the more vertical direction of the vagina due to backward displacement of the posterior vaginal wall.

This condition with its accompanying train of symptoms is brought about by the rupture of the only two structures in the perineal body whose restoration is absolutely essential to a cure i. e. the levator ani and transverses perineii muscles. The sling-like anterior fibres of the levator ani being divided, not only allow the outlet to drop backward, but further this tendency by their separation. The divided ends of the transversus perineii no longer pulling against one another separate and assist in dragging backward the posterior vaginal wall. Functionally these two muscles are absolutely responsible for the maintenance of normal conditions and their restoration means the restoration of function to normal. Their repair then is the essential point of any perineorrhaphy.

The importance of the mechanical points involved and the simple method of repair, here recounted is certainly worthy of your attention.

If we accept the fact that these muscles alone are responsible for all the evils of the condition under discussion, it immediately does away with the idea that a large perineal body is desirable. Nature did not construct a massive pad of connective tissue to act as a buttress in retaining the pelvic contents. If we can reunite the two functionally active muscular elements, we have a good perineum and one no larger than the oringal. Of the numerous operations the Tait and the Emmett serve as examples. The technique of the Tait being a splitting of a flap transversely and the gathering of a large amount of tissue by sweeping sutures, while the Emmett by a butterfly denudation, and sutures brings up the posterior wall and gathers the divergent points to a common center. With this type, usually successful in its object, if properly done, all are familiar.

This procedure has much to recommend it, in that it is simple, quickly accomplished and restores the function.

The Caruncles representing the normal limits of the introitus are grasped with tenaculi and separated. The flap at the mucous junction with the skin is split from side to side. With scissors or a sponge the mucous flap is dissected up and back exposing a triangular interval whose apex represents the summit of the rectocele which is the upper point of divergence of the torn lavator ani fibres. Latterly in the denuded area are the ends of the transversus perineii muscles. Traction downward of the middle point of the perineum demonstrates to the examining fingers the separated edges of the lavator ani above.

A suture of silk-worm gut is now

passed taking in the transversus perineii latterly near the caruncle. This emerges from before backward, picks up the edge of the lavator ani, crosses the gap and transfixes the opposite portion of the lavator ani and on the opposite side emerges from within outward, passing through the transversus near the caruncle. A second similar suture is passed nearer the middle line and lower down in the levator. Then three more which transfix the superficial muscle but not the levator ani. All these sutures emerge at the edge of, but not through the skin. Their approximation restores the normal position of the perineal structures. The mucuous flap is allowed to fall into place, leaving the suture ends to emerge at the junction of the skin mucous membrane. They are removed after 13 days at which time the knots are pulled up from their buried position and the suture cut.

There is nothing particularly new about this operation. As everybody is operating for this condition, and everybody has the same structures upon which to work. It is commendable because; first, it is quickly done; second, it unites only necessary structures; third, it does not destroy tissue; fourth, it works a functional cure. If the tear extends into the rectum, the difficulty is not particularly increased. The first step is the denudation extending around the severed ends of the sphincter ani, which can be located as dimples or pits in the skin. Having freshened the edge of the rectal tear the tissues may be approximated by silk-worm gut sutures interrupted and left long, emerging from the anus or as a circular suture to be inserted as near the mucous as possible. and surrounding the defect. It may be repaired by interrupted cat gut sutures tied on the rectal side. In any case, the wound is by this method converted into an incomplete laceration, whose repair differs in no way from the description given.

The results of this operation are eminently satisfactory. So is every other method of perineorrhaphy whose net results are the reunion of the levator ani and transversus perineii muscles. That is the object of them all, and we cannot better any method which accomplishes it. It is probably with this as with any other surgical procedure that ones individual skill at its accomplishment is more important than the method used. There is nothing harder to describe nor simpler to demonstrate than a perineorrhphy, but unfortunately, the latter method is seldom available. However, I am sure that those of you who have seen this method demonstrated will be pleased with its simplicity and with the successful restoration of function which we may reasonably expect to follow its proper performance.

Lissner Building.

MOVABLE KIDNEY.

Prof. Lucas-Championniere Academy of Medicine) believes that the numerous and variable symptoms met with in movable kidney are due particularly to traction upon the suprarenal glands. These symptoms may consist in severe disturbances of nutrition, with weakness and emaciation, reflex pains in various parts of the body, severe forms of neurasthenia, and even marked psychical disturbances. Displacements of the kidney have been found notably frequent in cases of mental disease. Suckling has obtained marked improvement from operation in twenty of such cases. The chief benefit derived from surgical treatment is attributable to the fact that the kidney is rendered immovable. The results obtained by Championniere have been very satisfactory, even in severe cases, only two failures having been observed in sixty operations.

CONGENITAL WEAKNESS.

P. Budin (Annales de Medecine et (nururgie Infantiles) says that prematurely born children are not easy to bring up. The internal organs are not well developed and not capable of functioning properly. The lungs inhale air only into the bronchial tubes, not into the alveoli. The gastrointestinal system does not act properly and assimilation is poor. There is marked muscular weakness, a soft transparent skin, of a bright red color, that allows the blood vessels to be seen through it. Temperature is subnormal, and they are subject to attacks of cyanosis, ending in death. The weight is less than normal, and those that weigh less than 2,000 grams are pretty sure to die. At the same time, some infants of small weight are perfectly developed and their organs functions properly. Others are undeveloped on account of hereditary conditions, such as syphilis and tuberculosis. It is most important that such children should not be allowed to cool, even to the normal temperature of the air, since a condition of hardening of the tissues comes on that is generally fatal. keep them warm they are wrapped in cotton under their clothing, though allowed free movement, and they should be placed in an incubator kept at a temperature of 28 to 30 degrees C. The feeding is most important, and mother's milk is absolutely necessary, and must be given with a spoon, since the weakness of the infant prevents him from drawing the milk from the breast. Every two hours the child should be removed from the incubator to feed and change it. If too much food is given, diarrhoea and gastro-intestinal troubles will end the patient's life. In case of cyanosis, artificial respiration becomes necessary, gently performed. They must be guarded against contagious diseases, since they easily succumb to them.



A MEDICAL, CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE. Established in 1886 by WALTER LINDLEY, M.D., LL.D., Editor and Publisher.

This journal endeavors to mirror the progress of the profession of California, Arizona and New Mexico.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN, Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW, Associate Editors.

Address all communications and manuscripts to EDITOR SOUTHERN CALIFORNIA PRACTITIONER. Subscription Price, per annum, \$1.00.

1414 South Hope Street, Los Angeles, California.

EDITORIAL

ARIZONA, OUR SISTER STATE.

California and Arizona are bound together by ribbons of steel, rivers of water, intimate community of interests and by indissoluble ties of friendship. With similar systems of irrigation, with united mining interests of the greatest wealth, both populated by people who love the soughing of the mountain pine, and the fascinating tang of the air of the mysterious desert, we face the world together.

Our professional life is practically one. The energetic, young California doctor makes Arizona his home, while the Arizona practitioner whose hairs have begun to silver comes now and then to California for his vacation. We love the people of Arizona. There is nothing mean, narrow or little about them. The Colorado River does not separate us, it simply cements us together. God bless our sweet sister Arizona, she was first kissed by the sun but now loved by us all.

AN EFFICIENT PUBLIC HEALTH OFFICER.

Some weeks ago a diphtheria epidemic broke out at the Patton Insane Asylum near San Bernardino, and before a grip had been gotten on the situation several patients had died.

The condition had evidently gotten beyond the local authorities and the California State Board of Health, through its Secretary, Dr. N. K. Foster, stepped in and took charge of the situation.

Two things were done under his direction. One, a culture was made from the throat of every employe and inmate of the institution from the medical superintendent down, and all persons showing the diphtheria bacillus in the cultures were isolated. Secondly, all clinical cases were placed in a separate isolation camp and the antitoxin treatment vigorously pushed.

Dr. Foster placed his bacteriologist in charge and as soon as the institution had been gone through once, cultures were taken from all throats a second time, and again a third time, and the culture taking is still going on at this writing and will be continued until negative results are obtained.

In this, as in his other work, Dr. Foster acted with tact and with energy and by so doing performed a great service not only to the inmates of the Patton Asylum, but to Southern California as well. The difficulties under which he had to work, for instance, transferring his bacteriologist from Berkeley to San Bernardino, may be taken as an excellent example of showing the need of a sub-bacteriological or State Health Board station in Southern California. The cost of such a station is annually many times paid out by the State, through lives lost that

could be saved, were such sub-stations in existence.

We believe, however, that Dr. Foster is thoroughly alive to the needs of the different portions of this great State in this respect. Certainly, when it is remembered, that when he took office several years ago, there were no records, in fact not even a desk, (if we except the salary warrant book,) which the Health Officer of this State could claim as his own, then the work accomplished by Dr. Foster and his colleagues on the State Board of Health has been indeed great.

We believe that the medical profession of California feels that it has in Dr. Foster an admirable executive and public health officer and because of his work generally, but more particularly because of his admirable grasp of the Patton epidemic, it becomes a pleasure to call attention to his efficiency and worth. Let us hope that he may long continue to have charge of the office which he fills to such credit to the profession and himself, and with such good results to the public health interests of California.

EDITORIAL NOTES

Dr. John Hagan is City Physician of Bisbee, Ariz.

Dr. D. W. White has located in Stanley, N. M.

Dr. F. E. Shine of Bisbee is away on an Eastern trip.

Dr. H. W. Fenner of Tucson is visiting in San Francisco.

Dr. Edward Moore of St. Louis has located in Belen, N. M.

Dr. Ancil Martin of Phoenix, Ariz., was in Tucson recently.

Dr. J. G. Ham has located at 429 D Street, San Bernardino.

Dr. John W. Trueworthy of Los Angeles has been on an Eastern trip.

Dr. C. D. Luedke, formerly of Oxnard, Cal., has located in Los Angeles.

Dr. Angus D. Cameron of Riverside is attending New York hospital clinics.

Dr. J. E. McBride of Santa Fe, N. M., has been enjoying the surf at Ocean Park, Cal.

Dr. Randolph W. Hill of Los Angeles is back from a vacation at Bartlett Springs.

Dr. George C. Sabichi of Randsburg has been greeting his friends in Los Angeles.

Dr. I. N. Woodman, formerly of Pennsylvania, has located in Tayos, New Mexico.

Dr. J. M. Holden of Long Beach has been attending the national conference of Elks in Dallas, Tex.

Dr. Bim Smith of Hermosillo, Mex., is planning for a two months' trip through our sister republic.

Oxygen in Medicine and Surgery is the title of a reprint by Wm. Seaman Bainbridge, New York City.

Dr. E. R. McPheeters of Globe, Ariz., who has been doing post-graduate work in Chicago, is at home again.

Dr. C. S. Stoddard of Santa Barbara has been greeting medical friends in the Los Angeles hospitals.

Dr. C. C. Valle, Health Officer of San Diego County, has been suffering from a severe attack of asthma.

Dr. Clarence E. Ide of Tucson has removed his office to the Rodger Bldg., South Stone Avenue and Ochoa Street.

Dr. H. Vance Clymer, surgeon for the Southern Pacific at Yuma, has been spending a few days in Los Angeles.

Dr. Louis Dysart of Phoenix, Ariz., has returned from a six weeks visit to Chicago and other eastern points.

Dr. D. W. Strause, aged 78 years, died in Albuquerque, N. M., July 21. He formerly practiced in Monon, Ind.

Dr. H. A. Hughes of Phoenix, Ariz., has returned from Denver, where he went to attend the Democratic convention.

Dr. Charles H. Whitman is now located in the Wright & Callender Building, Fourth and Hill streets, Los Angeles.

Dr. C. Freedman, graduate of the College of Medicine of the University of Southern California, has located in Redondo.

Dr. Albert Ross of Oxnard, Cal., has retired from practice and is making investments in the State of Tobasco, Mexico.

Dr. Fenton B. Turck of Chicago is author of Ulcer of the Stomach: Pathogenesis and Pathology—a reprint just received.

Dr. Samuel Outwater of Riverside is passing three months in New York in attendance on the eye, ear, nose and throat hospitals.

Dr. F. H. Marey, aged 35 years, died in Albuquerque, N. M., July 22. His body was taken to his old home in Knoxville, Tenn.

Dr. Clarence G. Toland has been commissioned assistant surgeon with rank of first lieutenant, in the Seventh Regiment, N. G. C.

Dr. J. A. Rolls of Santa Fe, N. M., and Dr. H. M. Smith of Las Vegas, N. M., have, with their families, been enjoying life at Avalon.

Dr. P. G. Capps of Crown King, Ariz., spent a few days in Prescott recently, on his way to Phoenix to take the Board examination.

Dr. Otto E. Plath of Phoenix spent a day in Prescott recently en route to the property of the Juanita Mining Co., of which he is a director.

Dr. H. W. Levengood of Jerome, Ariz., left July 22 for Boston, where he will take a post-graduate course at the Harvard Medical School.

Dr. R. W. Craig of Phoenix, Ariz.. left July 3 for Chicago and other eastern points to spend the summer vacation.

Dr. Francis H. Redewill of Phoenix, Ariz., has been elected Secretary of the Maricopa County Medical Society, to succeed Dr. E. C. Bond, resigned.

Dr. Clayton L. Rich, a well-known physician of Fullerton, Cal., and Miss Helen May Wilmis, a highly-esteemed trained nurse, were married July 22.

Dr. J. A. Ketcherside of Yuma has been appointed to succeed Dr. R. Ferguson as Superintendent of the Territorial Asylum for the Insane at Phoenix.

Dr. W. V. Whitmore of Tucson, President of the Board of Medical Examiners of Arizona, was in Phoenix July 6 and 7, attending the meeting of the Board.

Lieut. C. E. Yount of Prescott, Ariz., Assistant Surgeon Arizona National Guard, has been ordered out with the detachment of riflemen, for practice at Camp Brodie.

Miss Margaret Peterson, surgical nurse of the Kaspare Cohn Hospital, Los Angeles, is to be married at an early date to Dr. Frank McDaniells of New York City.

Dr. Oscar S. Brown, Santa Fe Surgeon at Winslow, Ariz., owns an orange grove in Riverside, Cal. He has recently been on a trip through Yosemite and Yellowstone.

Dr. L. D. Dameron of Phoenix, has returned from an extensive trip to various eastern points, where among other meetings of interest he attended the A. M. A. meeting.

The Thracians were addicted to intoxication with a sort of beer made from spelt (sometimes known as German wheat), and celebrated Dionysos with drunken orgies.

When the season changes a flock of curlew will fly from Nova Scotia to South America, a distance of twenty-five hundred miles, in a straight line without a stop, in less than three days.

Dr. Jose A. Enriquez is under bonds to appear before the Yavapai County grand jury in November to answer to the charge of violating the law governing the practicing of medicine in Arizona.

The prisoners in the Indiana Reformatory are educated to allow themseves to be sterilized (asexualized). More than three hundred of them have submitted to this operation. Let the good work go on.

Prof. R. A. Pearson, the new Commissioner of Agriculture, opposes the indiscriminate use of the tuberculin test. He insists that a great deal cambe accomplished by the physical examination of the cow.

Dr. Bertillon in writing of the alarming decrease of births in France says: "It is the duty of every man to contribute to the continuation of his nation quite as much as it is his duty to defend his nation."

Dr. D. C. Strong was recently reelected Superintendent of the County Hospital and County Health Officer of San Bernardino County, the former position at a salary of \$1800 per annum and the latter \$600.

Dr. Alberto Diez Vizcarra was recently prosecuted in Cochise County, Arizona, for violating the law governing the practicing of medicine in the Territory, and was sentenced to six months in the County Jail.

The Territorial Medical Board of New Mexico has censured Dr. Joseph P. Jones of the Carlsbad Tuberculosis. Sanatorium because of his methods. His practice consisted in the "Jones Chemical Intravenous Treatment."

In 1906 there were 743 cremations in England, Ireland and Scotland, while in 1907 there were 706 cremations, showing a decrease of cremations in the British Isles of over 5 per cent. although there were several additional crematories in operation.

The Republic of Switzerland has at last torn off her badge of shame. For a century that government has added greatly to its income by selling absinthe, but the people have, by a majority of 80,000, voted to prohibit the manufacture and sale of this insidious beverage.

The Old Dominion Journal of Medicine and Surgery for July appears in a new dress. It has been rejuvenated and reconstructed. The editorial staff is headed by Dr. McCaw Tompkins. It is published monthly by The Old Dominion Publishing Corporation, Richmond, Va.

The Order of Chevalier in the Legion of Honor of France has been conferred upon Dr. Charles A. L. Reed of Cincinnati. This order was established by Napoleon in 1802. Dr. Reed is also a Republican candidate for United States Senator, his chief competitor being the venerable Senator Foraker.

Dr. F. C. E. Mattison, of Pasadena; Dr. A. S. Parker, of Riverside; Dr. D. S. McCarthy, of Hemet; and Drs. H. G. Brainerd, Albert W. Moore, George L. Cole, Dudley Fulton, Arthur Godin, W. W. Hitchcock and W. T. McArthur, of Los Angeles, have all been resting among the pines at Idyllwild.

At the delayed meeting of the Santa Cruz County (Arizona) Medical Society, held recently, the following officers were elected: President, W. F. Chenoweth; Vice-President, A. L. Gustetter; Secretary-Treasurer, A. H. Noon; Delegate, P. R. Doran; Censors. A. L. Gustetter. A. H. Noon and H. W. Purdy.

The National Educational Association at their meeting recently in Cleveland held a great spelling bee. Two of the contestants attained a perfect record, one was a colored school-girl from Cleveland, the other a white schoolgirl from Pittsburg. The Cleveland team won and only two of its members were of American birth, and one of these a negro.

Dr. J. Rollin French of Los Angeles has located in the Spinks Building, corner Fifth and Hill streets, just opposite the California Club. Dr. French graduated from the College of Medicine of the University of Southern California class of 1906, was for one year resident physician at the California Hospital and has since been surgeon to the hotels of Yellowstone Park.

Dr. A. P. Williamson has resigned as Superintendent of the Southern California State Hospital for the Insane at Patton to take effect September I, and the Board of Managers elected Dr. E. Scott Blair as his successor. Dr. Blair graduated from the Medical Department of the University of Michigan, class of 1903. After September I Dr. Williamson's address will be Santa Monica, Cal.

After seventeen years service, Dr. H. G. Cates has resigned as chief surgeon of the southern division of the Southern Pacific Railroad and Dr. Edward T. Dillon has been appointed his successor with Dr. Harris Garcelon as first assistant. Dr. Dillon is a very successful young surgeon who graduated from the College of Medicine of the University of Southern California, class of 1901, and Dr. Garcelon graduated from the same college, class of 1904.

Dr. Maud Mackey, who graduated from the College of Medicine of the University of Southern California class of 1898, is spending a few months in Scotland. Dr. Mackey certainly deserves a rest as she has been medical missionary in China for ten years. Her many friends well remember their anxiety during the Boxer uprising when she had a narrow escape from assassination. She will be in Los Angeles about the first of November.

Dr. Harry G. Marxmiller of 412 Grant Building, Los Angeles, writes us: "Please call the attention of the physicians of Los Angeles to a man by the name of Ward who represents himself as a trained nurse from New York. He always has a hard luck story, gets money under false pretenses from the profession and drinks it up. I have helped him and know others have, and in looking him up find he is a fraud and I want the profession to know it."

Dr. Beran says: "In great Britain there are 36 medical schools. The control of medical education is in the hands of a General Medical Council. The English boy who eventually studies medicine, beginning at six years of age, has twelve years of preliminary education. He leaves the high school and begins the study of medicine at between 18 and 19, although he can begin legally at 16; he begins what is the minimum five-year course and as a matter of fact, the average time is more than 6 years."

At a meeting of the Santa Cruz County Medical Society, held at Nogales, Ariz., July 11, 1908, the following resolution was adopted:

"Resolved, That this Society expresses its sincere sorrow at the recent death of Dr. J. L. Nicholson, the first member of our Society to pass away, and who was one of the most active in its organization. His former activity and earnestness will be greatly missed by all our members.

"The Secretary is hereby instructed to spread this resolution upon the minutes, and forward a copy thereof to the Territorial Medical Association."

Before the days of the specialist in anaesthesia, no matter how expert the surgeon, his success was more or less at the mercy of the recent college graduate—or undergraduate—who secured a hospital appointment and came into the operating room as the anaesthetist, without any preliminary study of the art and without any knowledge of the influence of the different anaesthetics upon the human system. Now the day of the specialist has come, and with it the trained anaesthetist.

making incalculably happier the surgeon's task.—Dr. Jerome M. Lynch before the American Proctologic Society.

Dr. George Dock, Professor of the Practice of Medicine in the University of Michigan, has been elected to the Chair of the Theory and Practice of Medicine in the Medical Department of Tulane University of Louisiana. congratulate this historic college on this accession to its ranks. Professor Dock is America's greatest teacher of medicine. We hope this change will be congenial to him, but we expected that when he did give up his allegiance to Michigan it would be to go East instead of South or West. It had been the ambition of the profession of Los Angeles that they might induce Dr. Dock to locate here,

At the regular quarterly meeting of the Board of Medical Examiners of Arizona, held at Phoenix, July 6 and 7, eight candidates successfully passed the examination, and were licensed to practice in the Territory. They were Dr. P. G. Capps of Barnes Medical College, '08, who is located at Crown King; Dr. A. V. Smelker of Northwestern University, '05, at Nogales; Dr. Arthur Bechtel of McGill University, '08, at Helvetia; Dr. H. W. Houf of University of Missouri, '08, at Yuma; Dr. W. H. Sargent of Bennett Medical College, '05, at Phoenix; Dr. J. H. Tebbetts of University of Southern California, '08, at Metcalf; Dr. E. C. Wills of Medical College of Virginia, 'o6, at Phoenix; and Dr. S. D. Townsend of Medical Department Tulane University. '08, at Bisbee.

Surgeon-General Walter Wyman announces that candidates for admission to the grade of assistant surgeon in the Public Health and Marine Hospital Service will be examined in Washington on September 14, 1908. Candidates must be between 22 and 30 years of age, and graduates of a reputable medical college. The examinations will be

physical, oral, written, and clinical. Upon appointment, assignment is usually made first to one of the large After four years' service, hospitals. assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon; promotion to the grade of surgeon is made according to seniority and after due examination. Assistant surgeons receive \$1600, passed assistant surgeons \$2000, surgeons \$2500 per year, and are entitled to furnished quarters for themselves and their families or to allowance for the same. Further information may be obtained on application to the Surgeon-General, Public Health and Marine Hospital Service, Washington, D. C.

Paulus Algineta (who lived sometime between the third and seventh centuries) was a Greek surgeon born on the island of Aegina. He was first called the man-mid-wife, and was the first in all antiquity to deserve the name of accoucheur. He wrote the Synopsis of Medicine in seven volumes, and in this work shows that he is a devoted follower of Golen. This work in the original Greek was published in Venice in 1528 and several Latin translations have appeared. It was last published in Paris in 1855 having been edited by Brian, An English edition was published in London in 1834. He is the first writer who takes notice of the cathartic property of rhubarb. In has day many very young boys were castrated for future use in harems and elsewhere. They had the bloodless method which consisted in bathing the boy in warm water or an infusion of plants and then gradually pressing and manipulating the testes with the fingers until they were completely destroyed. Sometimes an instrument was used for crushing.

Dr. Cressy L. Wilbur, Chief Statistician Bureau of the Census, Washington, D. C., says: 'The International Classification of Causes of Death, which

is intended for the purposes of morbidity and hospital returns as well as for mortality statistics, will be subjected to its second decennial revision next year. This system, formerly known as the 'Bertillon system,' was recommended by a committee of the International Statistical Institute during its session at Chicago in 1893. It was urgently recommended for adoption by the American Public Health Association, representing the sanitary authorities of Canada, Mexico, and the United States, in 1808. In the first revision, held at Paris in August, 1900, representatives of twenty-six countries participated. It is employed by the United States Bureau of the Census, by all registration states, and by nearly all registration cities in the United States. Every country in North and South America has adopted it, and it is used by Japan, bv France, Spain, Holland, Belgium, Greece, Bulgaria, and other European countries. It has also recently been adopted, after careful comparison with the system formerly in use, by the Bureau of Census and Statistics of the new Commonwealth of Australia." Copy of a pamphlet on "Relations of Physicians to Mortality Statistics," containing an outline of the classification, will be sent any physician upon request.

DR. JOHN L. NICHOLSON.

Dr. John L. Nicholson, of Noga'es, Ariz., was born in Hong Kong, on the 21st day of August, 1865. He received the degree of "Associate in Arts" from Greenville College, and attended the Bullard School of Mines and Sciences. He was a graduate of Tulane University Medical College, '98, and in 1900 he took a post-graduate course at Harvard Medical.

He was a member of St. John's Ambulance Association, and was appointed Acting Assistant Surgeon in the U. S.

Army. He acted in the latter capacity in the Philippine Islands from 1900 to 1903, inclusive, and afterwards practiced his profession in Sonora, Mexico. Before his death he was Inspector-General of Hospitals for the C. R. Y. & P. R.R. Co. His duties took him into the interior of Mexico, and it was while on one of his inspection trips that he contracted the disease which finally terminated in his death. He was con-

fined to his bed at Guaymas, Sonora, for three weeks, became delirious, and was removed to Tucson by special train, where he died at the Sisters' Hospital, on the 3rd day of July, from multiple abscesses of the liver. His remains were shipped to Nogales, interment taking place on July 4 under the auspices of the Odd Fellows Lodge, of which organization he was a member.

BOOK REVIEWS

SURGERY: ITS PRINCIPLES AND PRACTICE. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D. LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume III. Octavo of 1132 pages, with 562 text illustrations and 10 colored plates. Philadelphia and London: W. B. Saunders Company, 1908. Per volume: Cloth, \$7.00 net; Half Mcrocco. \$8.00 net. W. B. Saunders Company, Philadelphia and London.

This volume carries us from chapter XXXVI to chapter LII, 1095 pages of surgical thought and literature.

Cushing's masterly article on surgery of the head is a book in itself, occupying two hundred and forty-nine pages, and is without a flaw. Its reading would be a liberal education to those who are so misguidedly and unwisely advocating the abolishment of animal experimentation; if they could but realize how much good has been done to brain surgery from knowledge gained from the lower animals one would think that any humane person would advocate vivisection rather than oppose it. In an article which is so uniformly good and so encyclopediac in character it is difficult to pick out any special subject for commendation, it is all good, but Part IV, the Brain, is such a decided advance over the usual text-books that we cannot refrain from calling attention to this section. The average surgical text-book does not seem to think that the operator need any especial knowledge of the nervous system, but surgery under the safeguard of modern asepsis, when turned loose upon this most important structure in the human body is a dangerous form of handicraft. Cushing has now operated nine cases of intracranial hemorrhage in the new born, cases that if they surprimary hemorrhage the through life handicapped from bilateral spastic paralysis or "Little's Disease." He has had four perfect recoveries, a brilliant record. The accident is carefully described in this article where it is shown that the treatment differs in no wise from the adult and always consists in the early removal of the clot; late removal is useless.

Wyllys Andrews's chapter of fiftyeight pages on the Surgery of the Neck is worthy of careful reading and study. He has in a few pages made the matter of embryonal cysts and fistulae of the neck very clear; a much better description than is usually found in surtext-books. French statistics show that not a single child in 25,000 births had a congenital or birth torticollis; while this is true to a certain extent we must remember that undoubtedly many children receive the injury during parturition which starts the Some writers, as myogenic changes. true congenital Andrews, recognize

cases in which the tissues that have lain contracted on the concave side of the deformity, in utero, become atrophied and shortened, exactly as they do in club foot.

Zesas's happy statement that the treatment of torticollis cannot be schematic, but must be individual, is endorsed.

Non-operative treatment commonly fails to cure, just as it fails in club foot.

The writer describes his own method of radical operation for deep cellulitis in the neck, a procedure that experience has taught us is most valuable. In considering these operations Andrews most correctly says: "No anatomic directions can be laid down that will apply to all operations." The curious and somewhat rare, ligneous abscess of the neck, the Phlegmon ligneuse of the French, is fully considered. These rare cases, one of which the reviewer saw last year in consultation with Dr. Stewart of this city, are as yet a pathological enigma. Andrews is unable to elucidate the problem and our own case unfortunately gave no more definite information.

A little fuller consideration of the very interesting surgical problems involved in the rare but important cases of carotid body or gland would have been desirable.

The author has considered the operation on the neck demanded by the various abnormal conditions before described under one heading and the pages are a very valuable exposition of today's methods in neck surgery. Crile's method and the operation en bloc is graphically described. Kocher presents a masterly consideration of the Diseases of the Thyroid Gland. The sixty-two pages thus alloted are a rare treat. Such authoritative statements as the following are pleasant to read: "To say that the surgical treatment of thyrotoxic disease is still the best is not enough. It has proved itself superior

to any other forms of treatment." "Early operation is the best treatment of thyrotoxicosis." Kocher, however, is unable to throw any additional light upon the actual cause of goiter formation. Our knowledge now is as it was fifty years ago. Goiters are caused by some abnormality or peculiarity of the drinking water and probably in its iodine content. We have, however, thanks to Langhans, probably advanced far enough to say that goiter is caused by a change in the secretory or resorptive function of the thyroid gland, due to special chemical peculiarity of the iodine combination. Fortunately, however, for the patient, the time has long passed when every patient was given iodine internally and externally without choice of preparation or accuracy of dosage; so also is it fortunate for him that we have abandoned the belief that every goiter must first be treated with internal remedies and referred to the surgeon only if internal medication

Kocher does not hesitate to endorse his own views and methods—these are his words: "Kocher's incision is the best," "Excision (Kocher) is the safest." Kocher evidently takes it for granted that we have all previously read his book, and I guess that we have, as in this article he does not go fully into the steps of his methods.

He believes that malignant changes are frequent in the thyroid gland and that the prognosis is more unfavorable than in the case of malignant disease elsewhere, a belief that experience has taught us is eminently correct, and that it is our duty to inform the public that an ordinary goiter can easily become malignant and further, that the only method of curing malignant goiter is by early operation.

The two articles, the Nose and Its Accessory Sinuses, the Nasopharynx and Tonsils, by Harrison Smith, and Surgery of the Larynx and Trachea by George Emerson Brewer, are very superior to the special articles that are usually seen in a treatise on general surgery. In fact, they contain all that is essential for the general surgeon and also for the specialist.

Brewer's article on the Surgery of the Chest shows great care in its preparation and accuracy in its statements. In the light of recent knowledge given us by Bier and Wright some modifications will be required in the section on the surgical treatment of tuberculosis of the lung.

One need but glance at the article Surgery of the Breast, by Finney, to see how wise was the editorial judgment that allotted this article. In a most attractive manner is here presented the entire subject of diseases of the breast and their surgical treatment. The article is accompanied by most graphic and beautiful illustrations and all in all it is a credit to American surgical literature.

We are glad to observe that Owens of London in his articles on the Surgery of the Mouth, Teeth and Jaw, devotes some space to Riggs's disease; pyorrhoea alveolaris is more and more finding its way into general surgical literature. For many years we have been convinced that it is often the cause of an obscure state of ill health. Owens is of a similar opinion and says that these patients present obscure rheumatic pains, headache, slight but continual and obstinate gastric trouble, and as a general rule diarrhoea or constipation; they have a gray appearance under the eyes. There is a reduction of red corpuscles and haemoglobin, with a slight lecuevcytosis. Sometimes I have noted purpuric rashes, purpura rheumatica.

We are also pleased to note that Owens recognizes the value of Wright's method of vaccination in these cases and has had remarkable success with it; so have we. Owens has unfortunately added nothing to our knowledge of odontomata, simply refers us back to Vol. I, to an article which is not as full as it might be. The article sometimes lacks explicitness, for example in describing the deformities of the jaws, he says that if the surgeon can get to work upon the case early he can greatly improve it (page 43) but the means and methods are not described.

Owens is entirely correct in his radical methods of treating epithelioma of the mouth.

A week or ten days before attacking the malignant growth the surgeon clears away all enlarged lymphatic glands from the neck, laying bare the carotid vessels and if need be sacrificing the internal jugular vein in the determination to remove all the tissue which has been secondarily invaded; both sides of the neck are so treated if necessary. When the wounds are healed the removal of the primary growth is undertaken. Perhaps, however, on the whole, the feeling among American surgeons is that patients have passed beyond the stage of hope when afflicted with malignant diseases of the mouth that have extensive glandular involvement, particularly if the glands have commenced to soften or if the glands under the upper end of the sterno clido mastoud muscle, those that pass into the base of the skull, are diseased.

We, however, do agree with Cobbs's opinion that the average duration of life is longer in cases operated upon than in the others, but is the life worth living? We have not seen all of our cases followed by mental and physical comfort by any means.

J. Chalmers Da Costa's article on the Surgery of the Tongue is like all that he writes, excellent and valuable.

John C. Munro of Boston is in the same class of writers and his chapters on the Technique of Surgery, Surgery of the Abdominal Wall, Surgery of the Peritoneum and the Retroperitoneal

Space, are representative and accurate.

This volume is something like the French Gourmands bonne bouchée in that the closing articles are by Gottstein of Breslau on the Surgery of the Esophagus; Mayo Robson, Surgery of the Stomach; William J. and Charles H. Mayo, Surgery of the Liver, Gall Bladder and Biliary Ducts; B. G. A. Moynihan, Surgery of the Pancreas and Spleen.

WILLIAM A. EDWARDS.

THE BLUES (Splanchnic Neurasthenia). Cause and Cure, by Albert Abrams, A.M., M.D., (Heidelberg) F.R.M.S. Illustrated. Third Edition, Revised and Enlarged. New York: E. B. Treat & Co., 241 W. 23rd St., 1908. Price, \$1.50.

That this small volume on Neurasthenia, or rather as the author wishes to term it Splanchnic Neurasthenia, or "The Blues," has now entered upon its third edition speaks well for the usefulness of the work, which consists nine chapters: 1st. Devoted to general consideration of the "Blues." 2nd. General irritants of neurasthenia. 3rd. Special irritants of the same. 4th. The general and special symptoms. 5th. The general treatment of the condition. The 6th chapter is devoted to explaining why he terms this particular Splanchnic Neurasthenia "The Blues." The 7th and 8th deal with the symptoms and treatment of "The Blues."

In the opinion of the reviewer the 9th chapter devoted the Intestinal-Auto Intoxication is where it really belongs, on the theory that the best should come last.

THE PRINCIPLES AND PRACTICE OF HYDROTHERAPY. A guide to the Application of Water in Disease. For Students and Practitioners of Medicine. By Simon Baruch, M.D., Professor of Hydrotherapy in Columbia University (College of Physicians and Surgeons), New York; Medical Director of the Hydriatric Department of the Riverside Association; Consulting Physician to the J. Hood Wright Memorial (formerly Manhattan General) Hospital; to the Montefiore Hospital for Chronic Invalids; Member of the New York Academy of Medicine; formerly Gynaecologist to the Northeastern Dispensary; Physician for Eye, Ear, and Throat to the Northwestern Dispensary of New

York City; Physician and Surgeon to the New York Juvenile Asylum, and Chief of the Medical Staff of the Montefiore Home for Chronic Invalids. Third Edition, Revised and Enlarged with numerous Illustrations. New York: William Wood & Co., 1908.

This work by Prof. Baruch stands today as the chief work on Hydrotheraphy in America. Farthermore it is recognized very extensively abroad. It is only a few years ago that the first edition was brought forth, and the demand for the work has been such that the third edition comes to us.

The subject is becoming of so much importance that in many of the better medical schools it has been given a place of some prominence in the curriculum, and we hope it will not be long before every medical school in the land becomes enough impressed with its importance to do the same.

On page 517, to the special attention of which the reviewer would recommend every one who is fortunate enough to possess the book, the following conclusion is given:

"The reason that different results are obtained by different physicians from the application of water may be found in the technical errors committed on account of an erroneous conception of the rationale of hydrotherapy. To avoid this wreck upon which many have split, the reader will do well, carefully to study not only the technique, but the rationale of each procedure, and use a definite prescription for applying.

The clinical histories have been related chiefly to emphasize the manner in which the technique may be changed to adapt it to following conditions, and to enable physicians to write distinct and positive directions for the nurse who should be watched. If this cannot be done it were far more wise to refrain from this treatment unless a physician who has cultivated this special field can be retained to take charge of the case.

"Obstinate cases of nervous, gastric, pulmonary, cardiac diseases are constantly referred for treatment to specialists in these branches by the family physician, even when the diagnosis is not in question. The same course may be followed with advantage to patient and doctor alike when other remedial agents fail, by resorting to specialists in hydrotherapy, through which, as the celebrated Naples Clinician, Semmola, has written, 'frequently rare marvels of restoration in severe and desperate cases have been obtained.'"

UROGENITAL THREAPEUTICS, MEDICAL AND SURGICAL. A treatise on the practical treatment of diseases of the urinary and genital systems. By Filipp Kreissl. M.D., Chicago. Fully Illustrated. Chicago: Cleveland Press, 1908.

This admirable work by Kreissl is, as its name implies, a work on the therapeutics of genito-urinary tracts. It has very little to do with the etiology, symptomatology of diagnosis, except in so far as it may be necessary to the description of the treatment. In addition to the therapeutics, mention of the minor surgical procedures are taken up somewhat in detail for the purpose of aiding the general practitioner, in whose behalf the volume has apparently been written.

The author has been exceedingly fair in those cases where the methods of certain surgeons are spoken of in detail by giving their exact words, and full credit to them for the technique and operation. For instance, under the subject of prostatectomy where he mentions the Goodfellow operation, and speaks of it as the most simple of all operations in this condition, he quotes Goodfellow to the extent of two complete pages.

After speaking of the several methods by which movable kidney may be successfully cared for, in many cases without operation, he gives the following as indications for surgical relief: 1st. When conservative treatment fails to afford relief. 2nd. In intermittent hydronephrosis and renal colic due to

repetition of kinking the curvature of the ureter and for the prevention of structural changes in the kidney due to the twisting of the pedicle. 3rd. In severe gastric, intestinal or nervous disturbances due to displacement of the kidney.

Chapter 10, near the end of the volume, on the technique or nephrotomy and nephrectomy, consists of 18 pages, giving a very clear and concise regime of the accepted methods.

The book is well gotten up, beautifully indexed, and well supplied with marginal guides.

BRADYCARDIA AND TACHYCARDIA, with complete English abstracts and foreign bibliography, Part II in a series of monographs on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Prof. Edmund von Neusser, Professor of the Second Medical Clinic, Vienna; Associate Editor Nothnagel's Practice of Medicine. Authorized English Translation by Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College, etc. 150 pages. Cloth. Price, \$1.25, prepaid. New York: E. B. Treat & Co., 1908.

The translation of Von Neusser by MacFarlane seems one of the best of the commendable handbooks published by Treat & Co.

It is difficult to find names of medical men in Europe standing higher than that of Von Neusser, and this work covering as it does a very important subject, should be in the hands of every practitioner who considers himself capable of caring for disease of the heart. Indeed it is to these monographs by men of this stamp that we must turn for the best literature on subjects of this character.

It is divided into two parts, the first 48 pages being devoted to Bradycardia, and nearly twice as many in the second devoted to Tachycardia.

Under the treatment of these conditions, very little is given, except, naming, rather unsatisfactorily and without detail, the various remedies that have been found to be useful in individual cases. This perhaps is what

one should expect, as in a very great majority of cases the condition is symptomatic, and the original condition must be cared for therapeutically.

The appendix, consisting of some 40 pages, takes up: 1st. The cause of the heart beat, by Howell, of Baltimore, who discusses the subject at considerable length. 2nd. The original paper by Adams, as published in the Dublin House reports of 1887 on the Adams-Stokes Symptom Complex is given. 3rd. Abstracts from American and British literature and foreign bibliography on Adams-Stokes Diseases. 4th. Abstracts from American Medical literature and foreign bibliography on Tachycardia.

THE PSYCHIC TREATMENT OF NERVOUS DISORDERS (the psychoneuroses and their moral treatment). By Dr. Paul Dubois, Professor of Neuropathology at the University of Berne, translated and edited by Smith Ely Jelliffe, M.D., Ph.D., Visiting Neurologist, City Hospital; Instructor in Materia Medica and Therapeutics. Columbia University, New York, and William A. White, M.D., Superintendent Government Hospital for Insane, Washington, D. C.; Professor of Nervous and Mental Diseases, Georgetown University, Washington, D. C.; Professor of Mental Diseases, George Washington University Washington, D. C. Fourth edition. Funk & Wasnalls Company, New York and London, 1998.

This is a very scholarly volume on psycho-therapy written by a man who did so only after long deliberation. "We live in a period of exact research, of laboratory work, and of statistics that are more or less convincing, and I can offer only impressions and opinions which are based upon what I believe to be conscientious observations, and on reflections which are forced upon me by facts, but I do not possess the necessary scientific reputation to insure their acceptance."

The author brings to his task an open and balanced attitude. In his opening chapters he discusses the fundamental philosophy underlying the position which he holds, while in the latter part of the book, he describes clearly and charmingly the exact methods by which he has won his notable success.

His style is clear and direct, intelligible to physician and layman alike. The author contends that psychic disorders require psychic treatment and that many distressing and dangerous nervous disorders are purely or primarily psychic.

This volume by Dubois is one of the best on this subject which has yet come into our hands.

THE FORCE OF MIND; OR, THE MENTAL FACTOR IN MEDICINE. By Alred T. Schofield, M.D., M.R.C.S., author of "The Unconscious Mind." "The Springs of Character," etc. New York: Funk & Wagnalls Company, 44-60 East 23d Street, 1908.

This is a cleverly written volume by a medical man of wide reading and experience who discusses his subject from the standpoint of the medical practitioner. He advocates no system of mental therapeutics, he simply appeals to his colleagues to ask themselves in the causation and cure of disease, what part mind plays therein. He contends the subject is alluded to everywhere and taught nowhere. He asserts that no recovery is possible without this agency. He writes "the fact is that psycho-therapy, though so disliked by the profession, is the very bread of life to all quacks. It is outrageous that a power that is putting tens of thousands of pounds every year into unprofessional pockets, should be treated by medical men with such scant courtesy, not only to their own injury but to the

There is much of interest in the text presented by Schofield and the volume is worthy of careful study.

GAINING HEALTH IN THE WEST (Colorado, New Mexico, Arizona,) being impressions of a layman, based on seven years' personal experience with "climate." By George B. Price. New York: B. W. Huebech, 1907.

This is a small volume of 138 pages written by a layman in which the climatic advantages of Colorado, New Mexico and Arizona are discussed. His advice to consumptives is that of the

hygienic-dietetic measures. Such merit as is possessed by the book lies in its description of western conditions as the author found them. Some of his thoughts are well worthy of consideration by "tenderfeet."

SEX OF OFFSPRING. A MODERN DIS-COVERY OF A PRIMEVAL LAW. By Frank Kraft, M.D., Editor of American Physician. Cleveland, Ohio: B. Barsnette, Publisher.

The author states that he believes he offers "a solution of the problem of how to choose the sex of offspring, not by controlling the ways of nature, but by falling in and adopting them." On page 108 he states that "ova fertilized during an ascendent moon result in male offspring, those during a descending moon, in female offspring." on page 112 (the last page) he writes that if care is taken, to know the times of the six hour rising and six hour falling of the tide at the place, and if the two sexes are allowed to have access to each other, only during the appropriate alternate six-hour periods . . . the resultant sex of the offspring may be foretold with cision. . . ."

The theory is interesting, but we confess the reviewer is not convinced.

THE LAW OF MENTAL MEDICINE, THE CORRELATION OF THE FACTS OF PSYCHOLOGY AND HISTOLOGY IN THEIR RELATION TO MENTAL THERAPEUTICS. By Thomson Jay Hudson, Ph.D., Ll.D., author of "The Law of Psychic Phenomena," "The Divine Pedigree of Man," etc. Fourth edition. Chicago: A. C. McClurg & Co., 1905.

Hudson gives us in this book a delightful presentation of the subject of mental therapeutics in language easily understood by all and in a style easy and pleasing. The first part of the book deals with the psychological principles involved in mental healing while the second portion has to do with the correlation of the facts of psychology and physiology in connection with mental healing. While all of the premises and conclusions of the author will hardly

be accepted by medical men, they will be provocative at least of thought and the subject of mental therapeutics, at least in American life, has now reached such a wonderful stage of development, that it can no longer be ignored. For the medical profession to do so, will weaken the hold of scientific medicine upon the people. What is needed is a careful investigation with a demonstration of its fallacies and an acceptance of proven propositions, many of which by the way, have been accepted by the members of the healing art, for centuries past.

OXFORD MEDICAL PUBLICATIONS: DIETS IN TUBERCULOSIS; PRINCIPLES AND ECONOMICS. By Noel Dean Bardswell, M.D., M.R.C.P., F.R.S., (Edin.), Medical Superintendent, King Edward VII Sanatorium, and John Ellis Chapman, M.R.C.S., L.R.C.P., Medical Superintendent, Coppin's Green Sanatorium. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E. C., 1908.

The subject matter presented by Bardswell and Chapman represent the result of seven years' investigation carried on under the government grant of the Royal Society of England.

The authors naturally give to Bodington, a member of their own race, rather than to Brehmer and Dettweiler of Germany, the major credit for the discovery of the value of the open-air treatment of tuberculosis. They call attention to the unfortunate and yet so often overlooked fact that inadequate and even improper diets are taken by very many of the poorer classes even in health, and that this is due not only to lack of money, but lack of knowledge on the part of wives, in the preparation of food. For a poor consumptive to return from a sanatorium to such surroundings, is but to condemn himself to a return of the disease. On the other hand, it is possible to give such a person an adequate diet at nominal cost, and that is one of the objects of the present book.

The scope of the inquiry included the principles upon which dietaries for con-

sumptives should be constructed, the nutritive value in proteid and the total caloric value of the standard diet, the best lines upon which such an efficient dietary can be economically constructed for actual use, the minimum cost at which a suitable diet can be bought retail, the comparative nutritive and economic values of various food stuffs and the comparative value of proteid, from animal and vegetable sources, in the dietetic treatment of consumption.

The scientific manner in which these various inquiries were investigated, makes this monograph a valuable contribution to our literature on this subject.

MEAT AND FOOD INSPECTION. By Wm. Robertson, M.D., D.P.H.F.P.S., Medical Officer of Health, Leith; formerly Medical Officer of Health, Perth and Paisley; author of "Practical First Aid" (third edition); joint author of "Sanitary Law and Practice;" Lecturer on Public Health, Royal College of Surgeons, Edinburgh; Lecturer of Public Health, Women's College, Edinburgh; Examiner in Public Health, Conjoint Board, Scotland; Examiner in Public Health, Incorporated Sanitary Association, Scotland; with regulations governing meat inspection in the United States by Maximilian Herzog, M.D., Professor of General and Comparative Pathology in the Chicago Veterinary College; Pathologist of the Michael Reese Hospital; Expert of the Chicago Stock Yards Investigation Commission of the Illinois Manufacturers and the Chicago Commercial Associations; Late Pathologist to the Bureau of Science, Manila, Philippine Islands. Chicago: W. T. Keener & Company, 90 Wabash Avenue, 1908.

The United States has seen a marvelous change in the attitude of its people and the government on the pure-food question during the last five years. To the medical profession belongs much of the credit for this better condition of affairs.

It is assumed that all honest persons are opposed to adulterated or filthy or otherwise unfit foodstuffs. The question of determining this unfitness is, however, not always an easy one.

On that account Robertson's work on food and meat inspection, even though it is discussed from the English standpoint, cannot be otherwise than a welcome addition to our books on these topics.

The purpose of the volume is to discuss the subject in such wise that the ordinary public health official may fit himself to pass intelligently upon the conditions and product of slaughter-houses, dairies, stables, etc. Laws bearing upon food, the housing of animals, etc., are included. The diagrams and illustrations are good and at the present time the volume should be of real service to many who desire precisely the information it presents.

PRACTICE OF MEDICINE FOR NURSES. A text-book for nurses and students of domestic science, and a hand-book for all who care for the sick. By George Howard Hoxie, M.D., Professor of Internal Medicine, University of Kansas. With a chapter on the Technic of Nursing, by Pearl L. Laptad, Principal of the Training School for Nurses, University of Kansas. 12mo of 248 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$1.50 net.

This is an important addition to the rapidly increasing literature of nursing. Written by a physician of wide experience it fully accomplishes its announced purpose.

Surgeon General Walter Wyman of the Public Health and Marine Hospital Service has just issued from the Hygienic Laboratory (M. J. Rosenau, Director) Bulletin No. 73, being an Index-Catalogue of Medical and Veterinary Zoology. Subjects: Trematoda and Trematode Diseases by Charles Wardell Stiles and Albert Hassall. This is a volume of 400 pages and represents the combined card-catalogues of the Zoological Division of the United States Bureau of Animal Industry and of the Zoological Division, Hygienic Laboratory United States Public Health and Marine Hospital Service. These catalogues ranged in three sections: Authors. Subjects and Hosts. This is a valuable publication as it will save students an immense amount of labor.

MISCELLANEOUS

SKUNK WITH RABIES.

Painfully bitten by a hydrophobia skunk in her parents' home in Camp Verde Tuesday night, Miss Bannister, who has shown no improvement since then, will leave that place today for the Pasteur Institute in Chicago for treatment. Miss Bannister has been under the constant care of Dr. Hill since being bitten by the vermin. Her condition was such yesterday that her relatives became alarmed for her safety. J. H. Wingfield of Camp Verde telegraphed Barney Smith, chairman of the Board of Supervisors, vesterday afternoon, asking financial assistance from the board to send the girl to Chicago for treatment. Chairman Smith stated that the required assistance would be forthcoming on receipt of particulars. At a late hour last night no answer to Smith's telegram had been received.

The victim of the skunk's attack is only fourteen years of age. She was asleep in her parents' home when the skunk entered her room and bit her on the large toe of the right foot. Awakened by the bite she kicked, loosening the skunk's hold. The intruder at once caught her by the fourth toe of the left foot, severely lacerating it. The skunk then jumped from the bed and left the house, repairing to the hen coop, where it attacked and killed several chickens before making its escape. A dog which was in the house at the time of the incident, cowered in a corner of the room, being so terrorized at the sight of the striped vermin that it did not bark. While the skunk was playing havoc in the hen coop the dog could not be enticed to attack and drive

Dr. Hill was immediately summoned to the bedside of the bitten girl. He dressed the wounds and advised allowing her to stay under his care for a few days until he determined whether it was imperative to take her to the Pasteur Institute for treatment. From the tone of the telegram received yesterday by Chairman Smith, it appears conclusive that the physician feared bad results from the bites and advised taking her to the institute as soon as possible.

Grant Eads, proprietor of the stage line between Dewey and Camp Verde, informed a passenger from Cherry Creek to this city Wednesday, that the little girl was resting easy when he left and receiving the best of care and attention from Dr. Hill, who then hoped to be able to cure her without the expense of a trip to the institute.—Prescott, Arizona, Journal-Miner.

COYOTE WITH RABIES.

About midnight, July 21, two men were attacked by a coyote affected with rabies at the ranch of Henry Dowdle about five miles from Bowie. The men had been at work rounding up a bunch of beef cattle for E. A. Tovrea & Co., of Bisbee. The men had made their beds down about the windmill. About midnight, Sherman Krump thought he felt a bug of some kind. He was partly awake and threw up his hand to knock aside the supposed bug. He had no sooner made this move than he felt the sharp teeth of some animal fastened on both sides of the bridge of his nose. Krump jumped up and the animal ran

Krump ran to the water and began bathing his face to wash the blood that was running from the cuts on his nose, but at the time did not wake the balance of the boys around him who were asleep. Just as he was returning to do so, Eddie Dowdle, the sixteen-year-old son of Henry Dowdle, gave a yell and jumped out of his bed, calling that he

ubrication for Digital Examination is a case of



ger into an open pot of Petrolatum, with every probability of contaminating both digit and petrolatum and leaving the latter in this septic condition for future use.

Old Way-thrusting the fin- The New Way-lubricating the finger with



"K-Y" applied directly thereto from the tube thus avoiding contamination of any kind, either of the patient, or of the contents of the tube.

Which of the two procedures do YOU consider the safer for the patient?

Lubricating Jelly is non-greasy, water-soluble, antiseptic and contains NO formaldehyde. It is offered only in collapsible tubes. Sample upon request.

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had been bitten by a hydrophobia covote as he saw the animal disappearing. He realized that the bite of the animal was extremely dangerous, and saddled his horse and started for his home at Safford as fast as the horse could carry him. Yesterday he left for the Pasteur Institute at Chicago.

Krump did not seem to fear the result from the bite. He stated to those who advised him that he had better attend to it at once, that it would take at least twelve or fourteen days for it to kill him "and he was first going to deliver the cattle that he was after at Benson." Then he would go to the institute at Austin, Texas, he said.

Krump is a well-known cowboy and has been a resident of Cochise County for the past twenty years. For the past few years he has been in the employ of E. A. Tovrea & Co. buying beef cattle for the markets in Bisbee.

The bite of the hydrophobia coyote is said to be much more dangerous than that of the skunk which is so frequently affected with rabies in Arizona. When the coyote is taken with hydrophobia it loses its hair and shrinks up in size. The Mexicans are more afraid of one of these animals than any other living wild beast. There are few hydrophobia covotes about the country in comparison to the number of afflicted skunks that have a record of biting at least ten or twelve persons a year in the Territory.-Bisbee, Arizona, Review.

Where hysteria is the result of uterine troubles. Aletris Cordial RIO combined with Celerina is an excellent remedy.

QUESTIONS OF THE BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA, AUG. 4, 1908.

PATHOLOGY.

- What are the etiologic factors in myocardial degenerations? Describe the microscopic features of the various forms.
- Describe the autopsy appearance of the different varieties of pleuritis. What are characteristic cells in the exudates?
- Name the vegetable parasites that may infest the epidermis. Describe the gross appearance of the skin lesions in coccidioides.
- 4. Discuss the theories of hyper-thyroidism and hypo-thyroidism.
- 5. Give the post-mortem findings in a typical case of chronic interstitial nephritis.
- 6. What are the distinguishing hematological features in chlorosis, secondary anemia and pernicious anemia?
- What is the etiology of cholelithiasis, and what pathologic changes may result in the gall bladder and contiguous viscera?
- Discuss the surgical complications of typhoid fever.
- 9. Report on miscroscopic specimens,
- 10. Report on gross pathologic specimens.

PHYSIOLOGY.

- Describe the varieties and function of the white blood cells,
- 2. Discuss briefly the digestion of proteid foods,
- 3. Describe fully the movements of the intestines during digestion.
- 4. (a) If lipase be added to fat in a test tube, explain the action of the enzyme.
 (b) Why is the digestion incomplete?
- 5. Describe the gaseous interchanges occurring in the lungs and the circulating blood
- 6. (a) What is meant by the terms: Central motor neuron and peripheral motor neuron? (b) Describe a ganglion cell of the cerebral cortex.
- 7. What tissues receive their nerve supply from the third cranial nerve?
- 8. (a) When a nerve trunk is cut, what becomes of the peripheral stump? (b) If the severed ends are brought together by sutures, will this prevent degeneration in the peripheral end?
- Differentiate between cerebral and spinal paralyses in (a) reflexes, (b) electrical reactions of muscles, and (c) nutrition of muscles.
- Define: (a) hybrid, (b) macula lutea, (c) emmetropia, (d) lochia, (e) hemolysin, (f) dyspnea, (g) tenesmus, (h) dialysis, (i) micturition, (j) amylopsin.

GYNAECOLOGY.

- Diagnose atresia of the vagina from congenital absence of the same,
- Diagnose and give the treatment of prolapse of the urethra.
- What is meant by pyometra? Give causes and treatment.
- 4. What would you consider inoperable carcinoma of the cervix, why, and what would be your palliative treatment of the case?
- 5. Give diagnosis and complications of a case of gonorrhoea in a woman.
- 6. Give five causes of oophoritis.
- 7. What is deciduoma malignam, its symptoms and treatment?
- 8. Describe the operation of abdominal hysterectomy in a simple case?
- 9. When should you drain in abdominal operations?
- 10. What complications may follow draining?

ANATOMY.

- Describe the subarachnoid space and its connection with the ventricles.
- 2. What structural characteristics of the skull tend to preserve the brain from injury?
- 3. Describe the external jugular vein.
- 4. What nerve governs (a) extension of the forearm, wrist and fingers, (b) flexion of the forearm, (c) flexion of the wrist and fingers, (d) pronation of the hand, (e) supination of the hand, (f) abduction and adduction of the fingers?
- 5. What muscles are attached to (a) lesser trochanter of the femur, (b) corocoid process of the scapula, (c) pisiform bone, (d) head of the fibula, (c) lower angle of the scapula, (f) tubercle on the upper border of first rib, (g) anterior inferior spine of the ilium?
- 6. (a) What bony points on the posterior surface of the pelvis are at the level of the center of the sacro-iliac symphysis? (b) Between what bony points should measurements be taken to determine the length of the lower extremities? (c) What vertebral spine marks the lower limit of the membranes of the spinal cord and the cerebro-spinal fluid? (d) Between what bony points should a line be drawn to determine the normal position of the great trochanter of the femur? (e) What point on the thigh lies directly over the anterior surface of the capsule of the hip joint?



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- 7. (a) What relation have the external and internal abdominal rings and the femoral ring to poupart's ligament? What are the boundaries of Hesselbach's triangle?
- Give the surface markings of the deep and superficial palmar arches and tell what arteries form them?
- Give the surface markings of the heart.
- Give the surface markings of the liver.

GENERAL DIAGNOSIS.

- 1. Differentiate cardiac hypertrophy and cardiac dilation.
- Differential diagnosis of pleuritic and pericardial effusion.
- Differentiate intestinal colic, uterine colic and renal colic.
- Describe the anatomic varieties of abdominal hernia.
- Discuss the early diagnosis of pulmonary tuberculosis.
- 6. State the causes of exopthalmus.
- What structures are involved in bubonic plague? How are these structures affected?
- What organs are subject to tuberculosis?

- 9. Mention the varieties of eczema.
- 10. What is the practical import of hematuria and how can its source be diagnosed?

OBSTETRICS.

- 1. Describe, give pathology, care and treatment of gestational neurosis.
- 2. Name five causes of retained placenta, and give treatment of each.
- 3. (a) Give normal length of umbilical cord.
 - (b) Symptoms, dangers and treatment of abnormally short cord.
 - (c) Symptoms, dangers and treatment of abnormally long cord.
- What clinical symptoms would cause you to fear a retroverted uterus interfering with pregnancy; when and what is the greatest danger from this cause, and give treatment?
- 5. What clinical symptoms would lead you to fear toxemia of pregnancy? How would you verify or disprove it, and give treatment.
- 6. What clinical symptoms during the later months of pregnancy would lead you to fear puerpural convulsions, and what would you do to lessen the danger?

- 7. Describe the conditions present and tell the symptoms during labor that would cause you to fear post-parium hemorrhage, and what would you do to minimize the danger?
- Give cause, pathology and treatment of plegmasia Alba Dolens.
- State in full what directions you would give a patient for care of herself for the eight weeks following labor; general hygiene; diet; exercise, etc.
- Describe the conditions calling for the use of the perforator, the cranioclast, or the cephalotribe.

BACTERIOLOGY.

- State briefly the processes of preparing the following media:
 - (a) Bouillon.
 - (b) Blood serum.
- In case of suspected diphtheria state the technic of taking a culture from the throat, the preferable culture medium. the time and temperature of incubation, the preferable stain and process of staining.
- 3. Name a suitable culture medium for growing the gonococcus:
 - (a) Upon what observations does a diagnosis of gonorrhea rest?
 - (b) How may the gonococcus be differentiated from the ordinary cocci of supparation?
 - (c) Name one pathogenic organism morphologically similar to the gonococcus.
- Name five pathogenic organisms which are negative to gram's method of staining.
 - (a) Name five pathogenic organisms which are positive to gram's method of staining.
- Describe the morphological appearance of the bacillus typhosus.
 - (a) Name two groups of pathogenic organisms from which the bacillus typhosus must be differentiated.
 - (b) How would you differentiate them?
- 6. (a) What pathogenic organisms are commonly found in urine?
 - (b) What non-pathogenic organisms and under what conditions?
 - (c) How would you demonstrate the presence of tubercle bacilli in the urine?
 - (d) With what organism may the tubercle bacillus in urine be confused?
 - (e) State the technic of the microscopic examination of urine for bacteria.
- Name four therapeutic agents derived from the bacillus tuberculosis and state the theory of their use,

- Describe the protective agencies by which the body guards itself against the entrance and harmful effects of pathogenic bacteria.
- 9. Examination of two slides.
- 10. Examination of two slides.

HISTOLOGY.

- Describe the histological structure of the cochlea of the ear.
- Describe the histological structure of the cerebral cortex.
- Describe the histological structure of the mammary glands.
- Draw a diagram of a cross section of the wall of the urinary bladder showing histological structure.
- Name the histological characteristics of the cardiac muscle.
- 6. Name and describe the different varieties of epithelium.
- 7. Describe the histological structure of the lungs.
- 8. Two specimens.
- 9. Two specimens.
- 10. Two specimens,

HYGIENE.

- Distinguish between endemic and epidemic diseases.
- Describe a modern system of artificial ventilation.
- 3. What reasons can you give for not using personal clothing or toilet articles used by other people?
- 4. Give the incubation periods of five important infectious diseases.
- 5. How may sewer gas become dangerous to public health?
- 6. In what ways do gonorrhoea and syphilis influence population?
- 7. What diseases are known to be carried by animals and insects?
- 8. Give the technic for microscopic examination of meat for trichina?
- Tabulate in the order of their importance the ways by which typhoid may be transmitted.
- 10. In the prophylactic treatment of syphilis what methods are being used and with what degree of success?

CHEMISTRY AND TOXICOLOGY.

- Give the chemistry of carbohydrate digestion.
 - (a) In the Mouth.
 - (b) In the stomach.
- (c) In the intestine.2. Give the chemistry of proteid digestion, as above.

- 3. (a) What is meant by nitr gen equilibrium?
 - (b) What are the normal daily limits of urea elimination in the urine?
 - (c) Explain the formati n of usea and state how the output is increased.
 - explain the formation of uric acid and state how its output is increased.
- Give the chemical composition of human milk and cow's milk in percentages.
- 5. State the chemical composition of:
 - (a) Blood.
 - (b) Lymph.
 - (c) Urine.
- R. Define:
 - (a) Acid.
 - (b) Base.(c) Salt.
 - (d) Osmosis.
 - (e) Hydrolysis.
- What are the normal limits, one hour after a test breakfast of
 - (a) Total gastric acidity?
 - (b) Combined H. Cl.?
 - (c) Free H. Cl.?
 - (d) Describe the quantitative estimation of a. b. c.
- (a) Describe two qualitative tests for albumen in the urine.
 - (b) Describe one quantitative test for albumen in the urine.
 - (c) Describe one qualitative and one quantitative test for glucose in the urine.
 - (d) Describe a test for bile pigment in the urine.
 - (e) Describe a test for bile salts in the urine.
- State the toxicological effect of carbolic acid and the therapeutic measures you would employ in a case of poisoning.
- 10. (a) What is the antidote for arsenious anhydrid poisoning?
 - (b) Give a formula for manufacturing this antidote.
 - (c) Give a test for arsenic in stomach contents.

GONORRHEA IN CHILDREN.

Children are very susceptible to gonorrheal infection, and very frequently contract it from bed clothing, slop jars, etc. One child admitted to a children's ward may be the means of spreading the infection to a very large percentage of other children. In one hospital in New York 12 per cent. of the children were found to have gonorrhoea. I have had two cases recently,

one contracted by a child using a slop jar that a gonorrheal boarder had used, the other probably through the bed clothing, as the mother had an old case and the child was in the habit of sleeping with her. The doctor should give all the treatments to children, because if left to the mother or nurse, the treatment will be unsatisfactorily carried out. Cocainize the parts first by applying small pieces of cotton saturated with 4 per cent. cocaine solution. Irrigate the vagina with pot. permang. I-4000, by means of a small rubber catheter attached to the syringe. The tip must be inserted just within the hymen. If the trouble does not abate local applications of silver nitrate solution can be made to the vagina. The little patient is placed in the knee-chest position, with the parts well cocainized and a No. 10 Kelly speculum is inserted into the vagina. With the child in this position all parts of the vagina and cervix are painted with silver nitrate solution, strength varying from 3 to 30 per cent., according to your judgment.

The use of vaccine in acute cases has proved worthless. The only place it can be adopted is in chronic cases, gonorrheal rheumatism, pus tubes, etc., yet in these cases it is in but the experimental stage. The vaccine is difficult to obtain owing to the facts that the culture is hard to grow and each culture must be grown from two to three months.

PHTHISIS.

L. P. Barbour declares that susceptibility as applied to tuberculosis, is, like immunity, always relative. Certain influences and conditions of life lower the natural resistance and predispose to phthisis. As to heredity, children of very old or of very young parents are usually predisposed to the disease. Weakening of the parent by any cause may act in like manner. Crowded and unsanitary homes, workshops and fac-

tories all favor spread of the germs. Workmen who for years breathe gritty dust, almost always contract phthisis. Children are more susceptible than are adults. Excessive child-bearing and prolonged lactation increase susceptibility. Pleurisy, diseases of the heart, and diabetes appear to be predisposing fac-

tors. The habitual use of even moderate quantities of alcohol is, without doubt, to be added to this list. In touching on the treatment, the writer says that by keeping the patient in the path of healthful living, the physician can, in most instances, avoid the lighting up of quiescent tuberculosis.

THERAPEUTICAL HINTS

INFANTILE MORTALITY AND GOATS' MILK.

The superiority of the goat over the cow in the matter of cleanliness (difference in character of excreta, disinclination to lie down in filth); its immunity to tuberculosis, as shown by the fact that not a single case of the disease has been observed among the hundreds of thousands of goats slaughtered at La Villette, in Paris; the greater digestibility of the curd, which is flocculent rather than hard, leads William Wright (Lancet, November 3, 1906) to advocate the use of goats' milk in place of cows' milk in infant feeding. He asserts that it is superior in nutriment and more suitable in every way; that its proportionate cost of production is far less; that the proportionate yield is far greater; and that if the animal is properly fed and restrained, the milk will have no odor.

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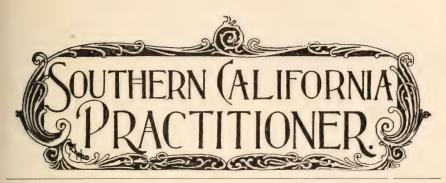
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PILOCARPINE FOR THE RE-LIEF OF PRURITUS, ESPE-CIALLY PRURITUS VULVAE.

Dr. John J. Reid (Medical Record) says that the value of pilocarpine in the treatment of pruritus vulvae and other forms of this affection has not received the recognition it deserves. The pilocarpine is to be used for this purpose in doses of from one-eighth to one-quarter grain.

FEWER AMERICAN STUDENTS IN GERMAN UNIVERSITIES.

The number of American students at the University of Berlin has fallen to the smallest figure on record. Only sixty-eight men and twenty-seven women from America are enrolled on the university books, as compared with a total of more than two hundred three years ago and more than four hundred ten years ago. A similar state of affairs is said to exist at Heidelberg, Gottingen, Jena, Leipsic, Halle, and other prominent universities.



Vol. XXIII.

Los Angeles, September, 1908.

No. 9.

DR. WALTER LINDLEY, Editor.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN, Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW, Associate Editors.

A REPORT OF FIFTY ABDOMINAL SECTIONS FOR VARIOUS CONDITIONS.

BY MARK A. RODGERS, M.D., SURGEON TO WHITWELL HOSPITAL AND ST. MARY'S HOSPITAL, TUCSON, ARIZONA.

These cases are not reported to show anything particularly new, but to demonstrate the variety of surgical work we are doing in Arizona. Some of the cases were exceedingly difficult.

The technique is that followed by practically all the successful operators of the present day, namely: Cat gut for suture material; no irrigation within the abdominal cavity; the Fowler position following operations on cases requiring drainage. My work is done at both the Whitwell Hospital and the St. Mary's Hospital. The former institution has a training school for nurses. The selections were general, a few of each class being taken for the purpose of showing the general range of work coming under observation.

CASE I.

DIFFUSE SEPTIC PERITONITIS.

Appendix Case with Pus.

Mrs. B. Aged 19. Sudden attack of vomiting attributed to the eating of bananas followed by a large drink of

whisky. No pain. Absolutely no tenderness or rigidity over any part of abdomen. Temperature 97 4-5. Pulse 66. Patient passed a comfortable night and experienced no difficulty in any way until 7 p.m. the following evening, when there was sudden sharp pain about the umbilicus, vomiting (green vomit) and rigidity of the abdominal muscles on the right side. Temperature 99 4-5. Pulse 66. Catamenia appeared with free flow. Operation at midnight. Median incision for the reason that no definite diagnosis had been made. Abdomen full of pus to the umbilicus, free in the cavity. Appendix gangrenous and stinking, but not ruptured. No adhesions. Pus spunged from abdomen and pelvis carefully. Appendix removed and gauze drain in split rubber tubing passed to the cul de sac and brought out through the lower angle of the wound.

Convalescence uninterrupted. Patient gave us some anxiety on the second

^{*}Read before the Arizona Medical Association, April 28, 1908.

day from flatulence and vomiting; but these symptoms yielded promptly under enemata of dry alum solution and lavage. Infection due to the colon baccilis.

CASE II.
APPENDECTOMY.
Pus Case.

R. Aged 18. Sharp attack three weeks previous to admission to hospital. McBurney incision. Many dense adhesions with pus in the appendix.

Recovery uneventful.

CASE III.

OLD APPENDIX WITH ASTHMA. Appendectomy. Without Pus.

Mrs. C. Aged 34. Patient suffered from asthma preceded by attacks of indigestion from irritable appendix. Ten years standing.

Operation by muscle splitting incision in groin. Appendix on the outer side of colon and extending parallel thereto: Exceedingly dense adhesions. Caecum removed from appendix and latter dissected from a bed of practically solid connective tissue.

Recovery uneventful. Patient has had no recurrent attacks of asthma six months after operation.

CASE IV.

CHRONIC APPENDICITIS WITH ADHESIONS.

Appendectomy. Without Pus.

R. Female. Aged 16. Domestic. Continuous pain in lower right hypochondrium. No other symptoms.

Operation by muscle splitting incision in right groin. Appendix firmly bound to colon for one-half its length.

Recovery uneventful. No return of pain,

CASE V.

CHRONIC CATARRHAL APPENDICITIS WITH ADHESIONS.

Appendectomy. Without Pus.

L. A female child. Aged 6. Had suffered from exceedingly severe attacks of vomiting (green vomit), with cramps in pit of stomach, unattended with elevation of temperature. Attacks

lasting from one to three hours at intervals of a week or two. Examination absolutely negative. No tenderness; no rigidity.

Operation by the McBurney muscle splitting incision in right groin. Appendix and head of colon injected. Colon twisted upon itself with appendic uppermost, attached to lower surface of the liver by a long band of adhesions. Appendix turned upon itself and bound to colon with numerous adhesions.

Convalescence uninterrupted and without event. Complete cure from preoperative symptoms.

CASE VI.

S. Female child. Aged 12. History of dyspeptic symptoms with cramps for two years.

McBurney incision. Removal of appendix six inches in length. Some adhesions

Recovery uneventful.

CASES WITH PELVIC PERITONITIS WITH
AND WITHOUT PUS, WITH BAD ADHESIONS AND OTHER PATHOLOGICAL CONDITIONS.

CASE VII.

Mrs. K. Aged 32. A sufferer for eight years. Several severe attacks of peritonitis.

Operation by median incision. Excessively dense old adhesions. Separation with scissors. Removed cyst of left ovary, size of a hen's egg. Left tube removed by dissection. Myomectomy of uterine fibroid, Removal of ovarian cyst in the right broad ligament and cyst of right ovary. Appendectomy. Recovery uneventful.

CASE VIII.

Mrs. pa K. Aged 23. Double pyosal-pinx. Excessively dense old adhesions. Dissection proceeded with the utmost difficult. Removal of right ovary and tube and left tube. Appendectomy Ventro-suspension.

Convalescence decidedly stormy but eventually recovered.

CASE IX.

Mrs. F. Aged 26. Median incision. Very dense old adhesions. Omentum firmly adherent to tubes. Dissected off with great difficulty. Old haematoma on left side. Removal of both tubes and appendix.

Very severe symptoms of peritonitis during convalescence. Much vomiting, pain and meteriorism. Recovery slow but complete. Patient gained twentyfive pounds in three months.

CASE X.

Mrs. B. Aged 28. Double haematoma, with ovarian cysts. Extensive adhesions. Double salpingo-oöphorectomy. Recovery prompt and uneventful.

CASE XI.

Mrs. J. Eight years invalidism. Temperature at operation, 103. Severe pain. Extensive adhesions on both sides, but no pus. Removal of both tubes and appendix.

Recovery uneventful.

CASE XII.

Mrs. A. Aged 36. Extreme dysmenorrhoea for several years.

Operation exceedingly difficult. Required practical dissection of both broad ligaments. Necessary to begin at uterus and work out. Exceedingly dense fibrous infiltration material, which under the microscope proved to be ovarian tissue.

Convalescence uneventful.

Very frequent are cases with tubal infection following either gonorrhoea or miscarriage. The following are quite typical:

CASE XIII.

Mrs. W. Aged 27. Acute pueriperal peritonitis. Abscess of right ovary. Removal of ovary and tube. Removal of left tube. Appendectomy. Some pilastic exudate and very extensive adhesions.

Recovery uninterrupted.

PUS TUBES.

CASE XIV.

Gonorrhoeal infection two Mrs. A. years previous. Median incision to umbilicus. Omentum spread neatly over pelvic organs and densely adherent. Appendix first withdrawn and removed, the stump neatly covered and returned to the abdomen, well out of the way of infection. The omentum was now gently separated from the mass below, spread out through the abdominal incision and bleeding points ligated after which it was returned to the cavity and the abdomen packed off with gauze. The abscesses within the tubes were now asperated, removing from each more than a teacupful of typical green gonorrhoeal pus. After removal of pus each tube was incised, its interior swabbed out thoroughly with a solution of bichloride, after which the cavity was packed with gauze. After all pus had been removed and the interior of the cavities made as sterile as possible the tubes were dissected free from adhesions and removed, the hemorrhage controlled by sutures, the pelvis spunged dry and the abdomen closed. The ovaries, although severly inflamed, were not removed.

Recovery without supparation of wound and uneventful.

CASE XV.

Mrs. H. Aged 28. Pyosalpinx haematoma and appendicitis.

Median incision. Very dense adhesions. Omentum bound firmly to old haematoma on left side. Separated with great difficulty. Tube removed. Large tubal abscess on right side containing nearly a pint of pus. Tube removed with technique as detailed in case VII. Difficult dissection. Ovary retained after separation of adhesions. Appendix also badly inflamed and adherent containing pus; also removed.

Patient's convalescence was interrupted on fifth day by a cerebral embolism, but eventually recovered. Some paralysis of muscle of right side remaining after five months.

CASE XVI.

Mrs. R. Aged 36. An exceedingly serious operation. Had been previously operated by Eastern surgeon who abandoned operation because of adhesions.

Median incision to umbilicus. Double pyosalpinx and appendicitis. Adhesions separated with fingers and blunt scissors. Entire pelvis denuded. Drainage through vagina, Appendectomy.

Convalescence stormy but made good recovery.

CASE XVII.

Miss G. Aged 24. A denizen of the tenderloin.

Patient unconscious when admitted to hospital.

Median incision to umbilicus. Very extensive pelvic peritonitis with much free pus. Double pyosalpinx. Very large abscesses. Both tubes and ovaries and appendix removed. Drainage through vagina. Abdominal wound was allowed to remain open for six days when it was closed by tying previously inserted sutures of silkworm gut.

CASE XVIII.

Mrs. C. Aged 27. Bed-ridden for three months. Median incision. Double pyosalpinx, large abscesses, cysts of both ovaries. Extensive adhesions. Double salpingo-oöphorectomy.

Convalescence uninterrupted.

CASE XIX.

Mrs. W. Aged 36. Median incision to umbilicus. Extensive adhesions. Right pyosalpinx. Congenital absence of ovary on right side. Left salpingitis. Removal of right tube, left tube, a portion of left ovary and appendix.

Recovery uneventful.

CASE XX.

Mrs. J. Double pus tubes with large ovarian cysts. Extensive adhesions.

Double salpingo-oöphorectomy and appendectomy.

Recovery uneventful.

CASE XXI.

Mrs. F. Aged 19. Double pus tubes and appendicitis. Extensive adhesions. Removal of both tubes and appendix. Recovery uneventful.

PROCIDENTIA UTERI,

CASES XXII AND XXIII.

Very similar cases. Both were women between 55 and 60 years of age. Both had extensive old perineal lacerations and complete procidentia with ulcers about the cervix.

In both cases the ulcer was excised. Extensive anterior and posterior colporraphy and ventro-fixation were performed, resulting in both cases in complete cure.

INTESTINAL.

CASE XXIV.

P. Aged 30. Brought in from an outside town suffering from intestinal obstruction. Incision at outer border of right rectus below umbilicus at apparent seat of obstruction. Proved to be a band of adhesions across ileum to colon at ilio-caecal valve. Adhesion severed and appendix removed.

Recovery uneventful.

CASE XXV.

Mrs. A. Aged 24. Operated at Nogales, Ariz., assisted by Dr. Gustetter.

This is a case which demonstrates that a man should never open the abdomen unless he is prepared to do any sort of an extensive operation; for there was nothing in the history of this case to warrant our anticipating anything more than a simple operation for the removal of pus tubes with adhesions.

On opening the abdomen the ileum was found adherent to the abdominal wall, and in separating the adhesions the gut was torn. This was repaired with Lambert sutures, but there was so much scar tissue present that the re-

sult was unsatisfactory. Proceeding with the operation, however, an old pus tube was discovered discharging into the bowel by two separate sinuses. After removal of the tube the intestine was now found wounded in three places. All of these openings were fortunately within a space of not more than seven inches along the gut. The original Lambert sutures were removed from the first tear and the two end openings attached together with a Murphy button by lateral anastomosis. The middle opening being repaired by Lambert sutures. Removal of both tubes. Appendectomy and ventro-suspension.

Recovery uneventful. Passed button on sixth day.

CASE XXVI.

C. Stab wound of the abdomen. Intestines extruded. No suturing.

Recovery complete and uneventful.

HYSTERECTOMY.

CASE XXVII.

Vaginal Hysterectomy.

Mrs. G. Aged 28. Small fibroid uterus. Uterus and tubes removed through vagina. Ovaries not removed. Recovery uneventful.

CASE XXVIII.

Miss H. Aged 42. Abdominal tumor to umbilicus. Large mass in pelvis. Incision through right rectus to umbilicus. Ovarian arteries first on one side, then on the other, ligated with heavy cat gut. Ligature also included round ligaments by a second passage of the needle and ligature. Incision through peritoneum from one round ligament to the other and with bladder pushed down from the mass in front. Ligation of uterine arteries was only accomplished after many ligatures had been 'passed and with great difficulty, because of exceedingly thick growth of tumor about cervix. Vesicle peritoneum sutured to peritoneum on posterior aspect of cervix. Cervix and broad ligaments buried in the usual manner.

Recovery uneventful.

CASE XXIX.

Mrs. V. Aged 42. Very similar to Case XXVI, but tumor weighed eight pounds.

CASES XXX AND XXXI.

Small fibroid uteri. Case XXX by supravaginal hysterectomy. Case XXXI by pan hysterectomy. In Case XXX ovaries were not removed, although patient had incipient pulmonary tuberculosis.

Both cases made prompt recoveries. Case XXX having since apparently recovered from her tuberculosis.

ECTOPIC GESTATION.

CASE XXXII.

Ruptured Extra Uterine Pregnancy.

Patient aged 36. Typical symptoms of rupture. Agonizing pain followed by palor, rapid thready pulse, sighing respiration, clammy skin, etc.

Operation by median incision. Abdomen full of free blood. Pregnancy in left tube which was ligated with ovary and removed.

Convalescence uninterrupted.

CASE XXXIII.

Extra Uterine Pregnancy.

Aged 24. Incomplete tubal abortion with hemorrhage into the abdominal cavity.

Median incision. Large mass of clots in cul de sac. Walled off by sigmoid, right tube and ovary and head of colon with appendix. Drainage through the vagina. Appendectomy.

Recovery uneventful.

CASE XXXIV.

Extra Uterine Pregnancy, Tubal Abortion with Hemorrhage into
Abdominal Cavity.

Operated at Nogales, Ariz., assisted by Dr. A. L. Gustetter of that place.

Median incision. Pelvis practically filled with clots. Much free blood. All

adjacent organs implicated including appendix. Drainage through the vagina. Appendectomy.

Patient developed an accumulation of pus in the cul de sac during convalescence which was opened by Dr. Gustetter. Convalescence stormy, with rapid pulse, but made good and prompt recovery.

CASE XXXV.

Extra uterine pregnancy with tuboovarian abscess.

Median incision. Many intestinal adhesions and extensive adhesions in pelvis. Removal of both tubes to prevent future pregnancy as patient had a bad mitral regurgitation with insufficiency.

After operation patient sank into coma and remained absolutely comatos for a month, being barely able to swallow. Eventually made complete recovery after a very tedious and prolonged convalescence.

OVARIAN CYSTS.

CASE XXXVI.

Miss B. Aged 19. Examination revealed mass in pelvis the size of a cocoanut.

Median incision. Punction and drainage of fluid of cyst, ligation of pedicle and removal. Proved to be left ovary. Another cyst of the right ovary, which had escaped detection, now presented itself and was removed.

Recovery uneventful.

CASE XXXVII.

OVARIOTOMY.

Mrs. S. Aged 46. Large mass in abdomen. Diagnosis, ovarian cyst.

Operation proved this to be a dermoid cyst about fourteen pounds in weight, containing several beautifully developed incessor teeth, a wisp of hair two yards long, besides skin and bone.

Patient made an uninterrupted recovery.

CASÉ XXXVIII.

Mrs. B. Ruptured cyst of right ovary, simulating appendicitis.

Patient sent in from an outside town accompanied by a note from her physician stating that the case seemed to be appendicitis. He did not, however, make a positive diagnosis. When I first saw the case she was much distended, tympanitic and gave a history of severe cramps the day before. There was very slight constitutional disturbance.

I opened the abdomen in the right groin and found to my surprise an ovarian cyst, twisted on its pedicle and gangrenous. Rupture had already taken place and considerable fluid had extruded into the abdomen. The cyst was removed, the abdomen spunged dry and closed.

Recovery uneventful.

CASE XXXIX.

Dermoid Cyst of Right Ovary. Simulating Appendicitis.

One might be inclined to think that after a man had spent fifteen years in constant study of surgical conditions within the abdomen, he should have no difficulty in differenciation between such apparently diverse conditions as an ovarian dermoid with a twisted pedicle and appendicitis. Nevertheless, the writer was unable to make a certain diagnosis until after the patient had been etherized, when the presence of a movable tumor became apparent.

When first seen, the patient had sudden excruciating cramps attended with vomiting. The temperature and pulse were slightly subnormal. The abdominal pain was diffuse and the muscular rigidity no more marked on the right than on the left side. There were pain in the rectum and a decidedly flat percussion note over right lower abdomen. There was too much tenderness for efficient abdominal palpation, and an exceedingly tight hymen prevented a vaginal examination without anesthesia. Examination per rectum was negative because of the extreme tenderness and

muscular rigidity. The patient was large and gave no history of anything indicative of tumor.

Within twelve hours the patient was on the operating table with pulse 94, respiration 29, temperature 106. After anesthesia, as stated above, a movable tumor presented itself and a median incision was made in consequence. The abdomen contained a large quantity of bloody fluid and a large ovarian cyst twisted upon its pedicle and thoroughly gangrenous. Cyst with contents weighed about nine pounds.

The abdomen was sponged dry, the cyst punctured, its contents evacuated and the mass removed.

The patient was returned to bed with pulse 76, respiration 24, temperature 988-10.

Recovery uneventful.

CASE XL.

Miss C. Aged 16. History of metarrhagia and metrorrhagia extending over three years. There was extreme anemia. Patient had been curetted eight times. A tentative diagnosis of ovarian cyst on the left side was made. Abdomen opened. Proved to be a cyst of left ovary the size of a hen's egg. Removal thereof with removal of left tube.

Convalescence prompt and cure complete within the year.

OPERATIONS ON THE GALL DUCTS.

CASE XLI.

D. Aged 70. Had suffered with gallstone disease for twenty or thirty years, according to his own statement. Operation had been advised by numerous physicians at different times. The symptoms finally became so distressing that death was preferable to existence as he was obliged to live it.

Incision along the outer border of the right rectus muscle to umbilicus. There were numerous dense adhesions between the gall bladder and ducts and the duodenum and colon. The under surface of the liver was universally ad-

herent by quite dense adhesions to all the adjacent organs. These adhesions were separated carefully and the adhesions along the gastro-hepatic omentum liberated. The gall bladder was now packed off with gauze pads in the usual manner, incised and about 1500 small stones removed from the bladder, cystic and common ducts; the latter by milking the common duct through the gastro-hepatic omentum. The wound was closed in the ordinary way with drainage.

Patient made a prompt and uneventful recovery and has been cured of the preoperative conditions.

CASE XLII.

W. Aged 42 years. Female. No attacks of colic or jaundice, but bad dyspeptic symptoms and chronic constipation for years. No positive diagnosis of gallstones made before operation. It was the intention to drain the gall bladder whether stones were found or not in this case. The gall bladder proved to be unusually large, containing thirteen stones each the size of a pecan.

Convalescence was rapid and uneventful, and the patient's symptoms much ameliorated. After about twelve weeks, however, the sinus into the gall bladder not having closed, I operated again, removing a portion of the gall bladder inverting its edges and closing the tissues above, layer on layer, with cat gut sutures. The wound closed promptly without bile drainage or sinus, and the patient is now completely cured.

CASE XLIII.

S. Aged 56. Female. Usual Mayo Robson incision along the outer border of rectus muscle. This case presented a small contracted gall bladder deep in the abdomen. It was exceedingly difficult to get at because of the large amount of fat on the abdominal walls and within the abdomen. Adhesions were quite universal and were separated with great difficulty. Opening the gall bladder, about two ounces of pus was

encountered. After sponging all septic material away carefully the gall bladder was seen to contain but one gallstone about 1½ inches in diameter. It was impossible to remove this stone intact without removing the gall bladder and the extreme depth of the organs within the abdominal cavity made rotation of the liver impossible. I thought it better, therefore, to crush the stone and remove it in pieces; which was done and an ordinary cholecystotomy performed.

The patient had a stormy and tedious convalescence, but eventually made a good recovery.

CASE XLIV.

L. Female. Aged 42. Symptoms of gallstone disease without obstruction for several years.

Mayo Robson incision and an ordinary cholecystotomy performed. Gall bladder contained about 300 small mulberry concretions.

Recovery was prompt and uneventful, patient being completely cured.

CASE XLV.

McK. Aged 54. Symptoms of obstruction with obstructive jaundice for ten years. Mayo Robson incision. Universal old adhesions to gall bladder and under surface of the liver. Gall bladder incised and found to contain but two stones, both in the cystic duct. Stones were now felt in the common duct which was incised and three stones ranging, from 3/8 to 1/2 inch in diameter, removed through the opening. Stones were now felt in the hepatic duct and eight stones of similar size were removed therefrom by milking the duct and pressing the stones out through the opening in the common duct.

VENTRO-SUSPENSION FOLLOWING RESECTION

OF TUBES TO PRODUCE ARTIFICIAL STERILITY.

CASE XLVI.

Mrs. H. Aged 24. Mother of three

children. This woman lived on a ranch many miles from any town and had a dread of further pregnancy amounting almost to mania. Preferred death to another pregnancy. On examination found lacerated perineum and retroverted uterus; great tenderness about peri-uterine tissue. Operation showed some salpingitis. Both tubes were resected and uterus suspended from its posterior surface to the anterior abdominal peritoneum.

Recovery uneventful. Patient gained twenty-four pounds in four months and was relieved of the fear of future pregnancy.

CASE XLVII.

Mrs. D. Aged 34. Mother of six children. Conditions practically the same. Woman lived on ranch, in mortal fear of future pregnancy.

Ventro-suspension of retroverted uterus and resection of both tubes at uterine cornu to prevent conception.

Recovery uneventful.

CASE XLVIII.

Mrs. T. The wife of a telegraph operator living at a small station many miles from any town.

Ventro-suspension of retroverted uterus and resection of both tubes at uterine cornu to prevent conception.

Recovery uneventful.

CASÉ XLIX.

Mrs. T. Aged 28. Gave birth to eight children in ten years. Ventrosuspension of retroverted uterus. Removal of cyst of right ovary and resection of both tubes. Appendectomy.

Recovery uneventful.

CASE L.

Mrs. C. Aged 26. Repair of a lacerated perineum. Ventro-suspension for uterine retro-displacement and resection of both tubes. Appendectomy.

Convalescence uneventful.

CEREBRAL CONCUSSION, CONTUSION AND COMPRES-SION—OCULAR SYMPTOMS.

BY F. W. MILLER, M.D., LOS ANGELES, CAL.

In view of the intimate relations between the bulb, optic nerve and brain cavities it is surprising that we have not more frequently to deal with ocular manifestations after serious head injuries and cerebral disease.

This is the more remarkable when we consider that, with the possible exception of the vagus, the nerves supplying the eye show the most frequent alterations of all the endocranial nerves.

The terms concussion and contusion infer more or less traumatic disturbance of the cranial contents.

Compression may be traumatic or otherwise.

The distinction between concussion and contusion has been a subject of much discussion, because it is extremely difficult to draw the limiting line.

The most satisfactory differentiating point, however, appears to me to be that concussion is a lesion that requires for its repair absorption only, while contusion requires more or less cicatrization to accomplish the result. The distinguishing features, however, are not for this paper to determine, but such distinction is frequently of importance in regard to the permanency and prognosis of the eye conditions.

Berlin has, in a fairly satisfactory way, made the following general classification of the ocular manifestations in these cases:

- I. Those which come on immediately after the injury and remain.
- 2. Those which come on at once and disappear in a few days.
- 3. Those which are late in their appearance.

The first depends upon laceration or other severe injury to the optic nerve, tract or center.

The second, to hemorrhage with pres-

ence of blood in the optic sheath or within the skull, which is probably absorbed.

The third, upon later intracranial complications from whatever cause.

No classification, however, can be exact and definite.

While we have been able to account for and understand the exact pathology and significance of the large majority of these eye symptoms a certain few are obscure and the cause of their presence conjectural.

Neither are ocular manifestations constant and regular in similar cases. When they are present they are of great aid and frequently the only symptom that can be relied upon to determine positively the extent and location of the lesion.

Their absence, however, does not negative the condition.

On account of the intimate relation of concussion and contusion, their ocular manifestations will be taken up together and separately from those of compression which presents an entirely distinct clinical condition

CONCUSSION AND CONTUSION.

The essential and significant ocular manifestations of concussion and contusion are extremely meagre. The lesions caused purely from the above conditions and secondarily affecting the eye and not a result of disturbance or injury to the extra cranial part of the visual apparatus, are not common or constant.

Certain well established phenomena are usually present, but are not diagnostic.

Immediately after the concussion the pupils are dilated and if it is profound, irresponsive to light. Occasionally they are unequal, but rarely at first.

There may be rotary or lateral mystagmus or any of the different paralyses of the motor and sensory functions of the eye. These paralyses are usually of a transitory nature, but should the injury be severe they may be more or less permanent.

If you will pardon the quotation of a personal case it will perhaps illustrate this point.

Mr. B., aged 45, was thrown from his bicycle, striking the head, which rendered him unconscious. He had no memory of the proceeding, neither any external evidence as to the extent and location of the injury. He soon recovered except for a slight general headache and an inability to use the eyes, particularly for close work.

Careful search of his eyes revealed a paralysis involving the superior oblique muscle of the right eye. This was his only permanent lesion. The contusion that occurred at the time of his accident was sufficient to destroy, in all probability, the nucleus of the trochlear nerve.

This condition is permanent for the cicatrization that has taken place makes any other result impossible.

Fortunately these permanent lesions are rare, but their possibility should always be borne in mind as a factor especially in medico-legal cases.

From the beginning of medicine, it has been a well-known fact that blows on the head may produce sudden and permanent blindness unaccompanied by any other serious symptom. Occasionally there is evidence of the condition in the fundus (optic atrophy), but more often there is no discoverable lesion. Just the exact mechanism of its occurrence is unknown. It has been considered entirely reflex through the fifth nerve—due to concussion of the retina or to hemorrhage that may be either extra or endocranial.

The eye symptoms of concussion and contusion, as a differentiating factor between traumatic unconsciousness and produced by other means, is of little definite value. In contrast the ocular manifestations found in cerebral compression are of great consequence and value, not only from a diagnostic standpoint, but frequently for localizing purposes. The ocular manifestations of compression are more definite, better understood and easier to classify. They are, of course, variable, depending upon the rapidity of onset, nature, location and extent of the exciting cause.

Cerebral compression may be of a fulminating character, or, as is more often the case, of gradual occurrence.

Hemorrhage, abscess, thromboses of the venous channels, meningitis or extravasations of any kind are usually rapid, while tumors, aneurisms, cysts and internal hydrocephalus produce the compression more slowly.

At the beginning of compression the pupils are narrowed, but as the pressure increases dilatation takes place, and, if any difference exists between them, it is more marked on the side of the greatest disturbance.

Theoretically, there is no reason for this, but clinically, Hutchinson has shown that when dilatation occurred it was more marked in 20 out of 24 times on the side of the extravasation.

Aside from the pupillary phenomena we find various ocular paralyses of both the motor and sensory functions of the eye. These paralyses are extremely diverse and produce a varied array of well known clinical pictures. They are more indicative, however, of localized conditions than of general increased cerebral pressure and are so extensive that they cannot be taken up in a paper of this length, so I will pass them and take up the one chief symptom of compression, viz., optic neuritis or "choked disk."

Occasionally it is the first indication and disturbance of vision may be complained of before any of the other wellknown symptoms of pressure.

It is practically always bilateral, so

amuch so in fact, that unilateral "choked disk" must be looked upon as a distinct lesion apart from the general pressure or that the cranial pressure is more or less localized. This can be accounted for if we will remember that the falx and tentorium practically divide the cranial cavity into three distinct chambers which more or less limits the general pressure effect, up to a certain point.

For the production of "choked disk" the nature of the cause is immaterial, as is also the location of the disturbance, be it of the brain substance, meninges or bony wall.

The commonest cause, however, is tumor and in these cases it is present in from 90-95 per cent. It is particularly marked in tumors of the cerebellum.

The theories of "choked disk" have been numerous. The two chief ones only will I mention.

Ist. Dropsy of the optic sheath from fluid from the meningeal spaces. A neuritis of engorgement. The distended sheath of the optic nerve with compression of its termination produces a neuritis—the Stauungs papille of the Germans.

There are two sheaths of the nerve, one a continuation of the dura and the other of the pia. Between the nerve itself and the pia lies a continuation of the subarachnoid space. Between this sheath and the dural sheath is a continuation of the subdural space. For the production of "choked disk" it is immaterial which of these cavities is distended. In either case the circulation is disturbed and the result is the same.

In acute cases these sheaths may be filled with blood that is evidenced by retinal hyperaemia and extravasations into the vitreous.

2nd. The other chief theory is that it is inflammatory—a descending neuritis, an extension of the endo-cranial condition (meningitis, etc.), localized meningitis in tumors,

After all has been said it is probable that "choked disk" is not due to any single factor.

This likely accounts for the varied fundus pictures we find.

I have tried to illustrate the two chier types of "choked disk."

Chart I is the typical "choked disk" that is usually found in slow-growing non-inflammatory conditions such as tumors, etc., and is probably a true hydrops.

It may happen, however, that the swelling is not protuberant and higher but that the swollen papilla becomes flattened.

Under these circumstances, opaque, cloudy exudates and numerous hemorrhages reach far into the territory of the retina to an extent of a full diameter of the papilla or even beyond producing a neuro-retinitis as on Chart 2.

This type is usually more acute and most likely of inflammatory origin.

These two extremely varied pictures, both indicative of introcranial pressure are likely the cause of the differences in opinion that are held relative to the mechanism of "choked disk."

There are cases, however, in which the symptom complex of cerebral compression is complete save there is no eye symptoms.

"Choked disk" offers no clew to the nature of the pressure and often not the degree.

It has no localizing value.

If it is persistent it is followed by atrophy of the optic nerve. This fact should always be borne in mind in curable cases, gummata, etc., decompression should be resorted to in an effort to restore or preserve sight.

To summarize:

Ocular manifestations of Concussion and Contusion are:

Dilitation with loss of light reflex.

Dilitation usually symmetrical.

Nystagmus.

Certain well defined ocular palsies.

Compression-

Dilitation most marked on the effected side.

Choked disk-

Ocular palsies of all kinds and degrees of both the motor and sensory functions of the eye.

These ocular conditions are frequently of great value for localizing purposes.

Hellman Bldg.

CAMP SANITATION AND MILITARY HYGIENE.*

BY MAJOR PAUL A. ADAMS, M.D., SURGEON SEVENTH INFANTRY, NATIONAL GUARD OF CALIFORNIA.

The problems which demand the attention of the medical department must, to a large degree, become the problems of all the officers, and for that matter, of the entire army, for upon the successful manner in which these problems are met and interrupted will depend the health and efficiency of each man, and hence of the entire organization.

Recent wars have taught many lessons and destroyed many ideals in matters military as well as in matters surgical, and the heretofore accepted idea which prevailed so notably in our army and in some European armies, that the chief function of the medical officer was to care for the sick and wounded, has been shown to be erroneous.

The legitimate purposes for which armies are enlisted—the killing or conquering of an open enemy in the field, instead of having four-fifths of its mortality victims to the dread foe of disease, has demonstrated conclusively that the most imperative duty of the medical officer lies in the field of prevention, and to him must be given the responsibility of maintaining the army in a state of efficiency. As a leading writer has tersely put it, "the preservation of the army by prevention of disease is the surgeon's duty, first, last, and nearly all the time."

Military men in the past have been very slow to recognize the importance of these matters, and that the health of the command must have first consideration if effective warfare is to result.

In every campaign from the time of the ancients even down to our late Spanish War, the army has really had to face two enemies—the armed men of the opposing side with their various contrivances for destroying life, who are only met with occasionally in battle, and the hidden foe of disease that has always been present in camp and hospital and bivouac.

This latter and silent foe has ever been more far reaching in its effects, and more deadly in the results accomplished. The records of warfare for centuries have proven that in prolonged campaigns the fatalities due to the open enemy have been 20 per cent. of the mortality of the conflict, while the silent enemy killed 80 per cent. It is a startling fact that out of one hundred men who have fallen in war. twenty have died from bullets or wounds, while eighty perished from disease, most of which was preventable.

The most reliable statistics of the battles of the last two hundred years show that rarely has there been a conflict of any great duration in which four men have not perished from disease to one from bullets. In the Russo-Turkish War eighty thousand died from disease and twenty thousand from wounds. A prominent French authority asserts that in six months of the

^{*}Delivered at the School of Instruction of the First Brigade, N.G.C., Los Angeles, August 1, 1908.

Crimean campaign the Allied Forces lost fifty thousand from disease and two thousand from bullets. An expresident of the New York Academy of Medicine who remembers that campaign, states that he had seen whole regiments die away from disease without ever reaching the firing line.

In our war with Mexico and in the Civil War the losses were about three from disease to one from bullets. Many men now living remember that ofttimes in a regiment more men perished from fevers and intestinal diseases in the trenches, than were slaughtered in the terrible battles of that conflict. And yet from these experiences very few lessons of value were learned. In the Boer War in South Africa the English losses from diseases were enormous—greater even than ours in the Civil War.

But the story of the lives needlessly sacrificed in war through preventable disease, ignorance, and incompetency, has its darkest chapter yet to be recorded—the story of our war with Spain where in 1898, in a war the chief campaign of which lasted only six weeks, fourteen men died from disease for every one who died on the firing line or from battle casualties.

The Surgeon-General of the United States Army published on October 10, 1905, the vital statistics of the American Army for the year 1898 in which he states that in the United States camps no men had died from casualties. but that two thousand six hundred and forty-nine men had died of disease. Could anything be more appalling than this record of the sacrifice of so many young men who, in the full strength of youth and vigor, had left their homes to fight for the preservation of our national honor? Is any greater testimony needed to show the necessity of reorganization and improvement in the work of our medical department?

The question may well be asked at

this point, what had caused this deplorable condition in this department?

Probably the three main causes have been lack of numbers, organization and power to cope with the sanitary emergencies that arise in time of war. And it is probably in this last that the secret of failure lies.

The medical officer, gentlemen, is the man who fights the foe which kills the 80 per cent., but he has not had the authority and power by oversight of dietary and sanitary control, to safeguard the interests of the organization. He has been allowed to make recommendations, but never issue an order. This recommendation he could submit to the commanding officer, who might accept or ignore it at his pleasure, providing only that he stated his reasons for his disapproval before forwarding it to a higher authority, who, in turn, frequently failed to appreciate the importance of the recommendation which had been made to him.

Major Louis L. Seaman, Surgeon of the United States Army, states that it is his belief that "until the line and staff officers of the American Army are taught the necessity of sanitation, and the medical officer is given rank to enforce it, our medical department must remain a humilitating failure."

The type of man most dangerous to the safety of the army and to the nation, may be illustrated by the utterances of two men who reflect the sentiment of a class of officers who could scarcely appear more ignorant of ANY subject than these remarks show them to be of sanitation and the work of the medical department. The first, a major-general during our Spanish War, who, on being waited upon by certain medical officers with a protest against the use of certain water at Chickamauga, said, in response to their complaint: "When I want your advice, I will send for you; until I do so, you can attend to your own business." The other, a prominent officer of the regular army, who had been detailed as an instructor in one of our large universities, made the observation, that, "no doctor had any business at the front; that, if one of them appeared on the firing line or near it when he was in command, he would kick him back to his place in the hospital, where he would remain looking after the sick and the wounded and attending to the business he was paid for; and, if he refused to go, he would put him under arrest and have him court-martialed; that all these examinations of water and wells and streams were humbug and tomfoolery, and that the use of boiled water on marches or in camps was impracticable. In times of war, he said, the place for a doctor was behind the army, taking care of the sick and wounded, but never in the front. If a doctor objected to a situation selected by him for an encampment, on the ground of its unsanitary condition or bad water supply, he would tell the doctor to go to hell."

It is interesting to note just here that in the recent Japanese-Russian War, where the records of former wars were reversed, and more than four deaths occurred from bullets to one from disease, as against the record of centuries of four from disease to one from bullets, or eight hundred per cent, better than the average of history, that the medical officers were at the front, and that every foraging and scouting detachment was accompanied by a medical officer with a water-testing outfit, who examined the water to be used by the troops, and placated the wells with a sign describing the character of the water, whether fit for drinking or otherwise, and when the troops arrived they were guided accordingly; that the service was particularly well equipped in microscopes to aid in making war on bacteria, saving thousands of lives by forestalling

possible epidemics, and determining in individual cases the nature of the disease present. For whenever a man suffered from fever his blood went under the microscope, and a true diagnosis of his condition was made.

Japan recognized that microscopes were as important as guns, and she sent them to the front, and they found their way into every place where an extended stay was made, and wherever bacteria were likely to be found. She instituted a splendid system of sanitation in a field that was especially dangerous, because the water supplies in the territory where the campaign was conducted had been left infected with the deadly germs of typhoid, dysentary, and cholera by the retreating Russians.

This system included the testing of the water and universal use of boiled water for drinking, the physical training of the men from barrack to battlefield, and the exercising of care over his baths, his sleep and his rations. During this campaign extending over a year and a half, with from three hundred thousand to six hundred thousand soldiers undergoing the severest hardships and privations of active service, there were in the Japanese Army thirty-six out of every hundred who never reported at sick call; thirty-six men who never saw the inside of a hospital or were sick in quarters—a record absolutely unparalleled. In every other recorded campaign it has been found that usually once during a period of every three to five months each soldier in his organization, or an average of that number, has reported to the military medical officer for treatment.

The greatest triumph, however, of this superb system was the return to the front of no less than forty thousand of the sick and wounded who had been taken from field and camp to the hospitals for treatment, and again returned to active duty.

The application by the Japanese of modern sanitary methods has caused a great change to come over the mind of military hygienists. We believe that the Japanese have proven that the normal condition of the soldier is health, and that those who die in war should fall on the firing line and not by the roadside from disease; and their present attitude is, that any country whose armies, in the future, are decimated by infectious diseases, will stand convicted of wilfull ignorance and criminal carelessness, and accordingly, will be discredited before the civilized world.

Since camp life has always been the prolific cause of the diseases from which soldiers suffer, camp sanitation must, therefore, be the chief object of the medical officer's care and attention. As a hygienist he can probably save many more lives within the area of the camp, than as a surgeon on the battle-field or at the field hospital.

The diseases from which soldiers in the field suffer and which have so often crippled armies and decided the outcome of campaigns, are comparatively few in number. They are chiefly typhoid fever, dysentary, and diarrhoea, and to a very much less extent, cholera, smallpox, malarial fever, yellow fever, typus fever, scurvey and veneral disease. It is a matter of great importance for us to realize that all of these diseases are preventable, some more easily than others, but all are under our control if proper sanitary methods are employed.

The danger in a camp from infectious diseases is due largely to the facility with which germs are conveyed from the sick to the well, where a large number of men are camped together, and with this, the difficulty with which susceptible soldiers escape infection.

All of this means that our camps should be as small as possible, avoiding large concentrations of men. It

should be a universal rule never to occupy old camp sites, and the camps established should be moved to new ground as often as necessary to prevent infection of the soil. Such moving of camps not being always possible and often unnecessary if the sanitation has been well looked after, a good plan to follow is to shift the tents, every week or two, to the vacant spaces between them, or just in front or in rear of them, as the case may be, replacing them at the next shift to their original positions. Thus the sun, which is our most powerful disinfectant, can act on the soil that is within the tents which is most likely to be polluted.

The two diseases which prevail most extensively in camps, and against which we must especially be on our guard, are typhoid fever and dysentary. As these are frequently conveyed by water, one of our chief sanitary duties must be to see that a reliable water supply is available for the use of the men.

When an army is advancing rapidly into a new country it may not at all times be practicable to determine the degree of purity of all waters, although medical officers will often be able from taste, smell and appearance, as well as surrounding conditions, to form some judgment as to its value. There should always be, however, at the most advanced base or stationary hospital, a chemical and bacteriological outfit for the quick examination of samples of water sent from the front, especially if many men are to make use of it.

Various methods of purifying water in the field are being used, and there is a question as to their comparative value. Chemicals are sometimes added to the water, the Germans have an apparatus by which ozone is introduced into the water. It is open to criticism, however, for although the ozone may destroy the dead organic matter present, bacteria being more resistant may not be af-

feeted Capt Darmall, of the Medical Department of the Army, has an appearatus by which the water is not boiled, but by a process of illitration and the use of certain coaguleuts, is purified.

The Forbes' Sternlizer is the one officially adopted by our army and used in most of the camps. It, however, is a laboratory affair, too cumbersome for moving troops, too complicated for the average soldier to handle, and its tubes and pipes are liable to become incrustated when hard water is used.

The important thing in this connection is that the water must be boiled, and the simplest method of doing this is the one that will usually be adopted

At the model camp established at the Jamestown Exposition, of which Major Charles E. Woodruff, Surgeon of the United States Army, was Chief Surgeon, all the above methods of purifying the water supply were considered and the one adopted seems eminently practicable. A water can was devised which was simply a boiler closed at the top to keep out dust and smoke, and fitted with a small hinge part to permit cleaning or introducing ice, and a spigot at the bottom to avoid the use of a dipper. This could be heated on an open fire and loaded in wagons for transportation on marches.

The use of tea and coffee in the field as a beverage might well be considered. They are made with sterilized water and are palatable, even when in a very diluted form, the tea more so than the coffee.

Probably the most important and difficult question confronting the camp surgeon is that of the disposal of excreta. It is well known that the germs of typhoid fever, dysentary and cholera are found in the feces; while in typhoid fever, the urine is also liable to be strongly contaminated. Other waste materials as those from the kitchen, rubbish and camp sweepings, and ma-

mure, must be disposed of. The latter may be carted out of camp to distant dumps and removed by farmers, or else should be sprinkled by coil oil and burned, as it may be one of the main breeding places for flies.

The plan usually adopted in the past has been to bury all waste material, either by earth burial or by water burial as sewerage. For excreta the Reed Troughs, fitted with seats, have been used. These are emptied daily by pumping the contents into a wagon and hauling it away. It is known as the "odorless excavator system," the contents being disinfected by lime, and water being added. Lime may also be sprinkled on the ground around these troughs to make the disinfection as complete as possible. This method is not applicable for winter use in cold climates.

It has been thought that a moving command, in particular, which stays but a few hours or days in each camp, had no time to install a more extensive system. Also that two or three weeks was the limit of time that could be spent in one camp site without a sewer system. The model camp at Jamestown has changed this idea and has proven that cremation of all waste materials must take the place of burial in all camps—short and long—as being cheaper and enabling camps to remain in situations formerly fatal.

For urme and feces the McCall Latrine. Incinerator is of great value. It is merely a simply constructed set of furnaces, each one having a wooden top and four seats, and from pans to catch the materials. When cold it is used as a latrine. When the iron pans are full, the wooden seats are removed, from lids adjusted and a fire built underneath to incinerate the feces. Urme is collected in separate tanks and run slowly into the pans for evaporation, after the heat is well raised. Several may be connected to a common

stack under which is a fire, for the secondary combustion of smoke and organic gases. The use of this incinerator has been very successful, there being no odors or flies and no handling of feces, as where an attempt was made to remove them from unsewered camps.

A simpler plan for moving commands or short camps where there is no time to erect the McCall Incinerator, is to dig a trench about four feet long and deep, with one end open to build a fire. Iron pans are placed on shelves made in the sides and it is boxed in or surrounded by brush to keep out flies. When the pans are full, the wooden seats are removed, and the fire built. As soon as the feces are charred they are scraped into the fire and the urine run in for evaporation. The odors, of course, may be noticed, but it is a simple and quick method of procedure.

In order to protect the ground at night between the tents, each company should have a urinal can for night use to stand in the company street, and be emptied into the latrine after reveille. After emptying, the cans may be burned out with a little hay or straw or kerosene, and lime sprinkled inside. The cans may be kept covered near the latrine sheds during the day.

At this model camp it was proven that in all cases it is practible and cheap to cremate all excreta. This does away with all concern as to whether the bacilli of disease are present in the feces, and makes unnecessary the use of disinfectants in latrines.

The kitchen garbage and the rubbish of the camp should also be burned in garbage pits. When the pit is hot the garbage may be poured over it, bottles, cans, water, bones, everything—the water evaporates, the garbage burns and the next day the ashes are shoveled out.

In a camp of longer duration than three weeks a sewerage system becomes advisable.

These newer methods of cremation

will remove the dangers that have heretofore attached to o'd camp sites, and if rightly carried out an abandoned camp site may be as safely occupied as a well sewered city, and in this do we see illustrated the manner in which methods of modern military sanitation are revolutionizing old ideas.

Great care must be taken that no water is thrown on the ground to pollute the soil and attract flies and mosquitoes. These should be guarded against by screening kitchens and dining places, and compelling each man to use a mosquito netting whenever necessary.

If many mosquitoes are present their breeding places should be sought and destroyed. Great care is necessary in this matter for we do not know how much disease is carried by these insects.

Cooking tents ought to be very carefully inspected, as cooks are apt to leave food exposed to flies, to scour their dishes with muddy sand and neglect to properly wash them afterwards, to neglect their dishcloths, their own persons, and to take water that may not be safe to use from some place that is more convenient.

Infectious disease should not be allowed to remain in camp any longer than possible, but should be taken to a hospital for treatment. The patients will get well much sooner, and the camp is rid of the infection.

In selecting a site for a camp the essential requirements of the service are wood, water and grass, and from the standpoint of sanitation, dryness, elevation and some protection from winds. If near a lake or swamp the direction of the prevailing wind should be noted and the camp site chosen on the windward side. The ground should have an easy slope, shallow trenches should be dug around each tent, and these trenches should lead to a main to carry off rain water. If the camp is permanent the tents should be floored, and

the floor made in sections so that it can be removed for policing and sunning the ground underneath. Men should never be allowed to sleep directly on the ground, and whether there are floors or not, the ground should first be covered by hay, straw, brush, rails, or even sand, in order to raise it above the general level, and keep the occupants off the damp earth.

In closing, I want to say a few words as to personal hygiene. Cleanliness of person and clothing must ever be the first requisite for good health. In the recent Japanese War a small book of instructions was issued to each soldier. and the portion relating to the care of the body is terse and to the point, and is here quoted: "Do not forget to keep every part of the body clean. In case one cannot take a bath frequently. rub every part of the body with a towel daily. Keep the hair cut short and wash the head frequently. Every morning brush the teeth well. Keep the hands and feet clean, especially. Dirt from the nails contains poisonous materials, therefore cut the nails often and clean them. Wash underclothing and stockings often, otherwise there is no value in keeping the body clean. Keep the shoes soft and oil them frequently. Shoes are the horses of the infantry, therefore protect them as carefully as riders do their horses.

"The origin of strength in the human body is good food. Eat sufficient and do not go hungry, but remember that too much eating and drinking causes ill health. Never partake of any dish that gives an offensive smell or unusual taste. Never eat any raw food, or drink unboiled water, and never eat or drink supplies left by the enemy. Tea and coffee are excellent stimulants when one is tired, and so is tobacco."

It is stated that, as a final act of preparation, just before the great battle of Mukden, every Japanese soldier made

sure that his first aid package was ready for instant use, and every soldier had a bath. Then the battle began.

No account of the importance of personal hygiene in army life would be complete without some mention of venereal disease. It constitutes one of the greatest dangers to which the soldier is exposed. Ordinarily regarded by soldiers as of trivial importance, gonorrhea, chancroid and syphilis are so far reaching in their effects, that these effects should be thoroughly understood. The probability of contracting some form of venereal disease in illicit intercourse is very great; about a third of all women prostitutes are infected, and all are certain to become so in course of time. Army reports show that our army stands as well, if not better, than that of other great nations. Comparisons, however, give little consolation to the man infected. subject ought to appeal to the judgment of every medical officer, and inspire him to do all that he can to lessen this uncalled for invasion of disease.

We feel that the broad principles of hygiene and sanitation are well known to every medical man in the army and in civil life. The principles of shelter, food, raiment, climate, morality, are all taught in schools and laboratories, and we want to see the practical demonstration of these principles in the daily life in armories, barracks and in the field.

We believe that the day has arrived, especially in time of war, when the medical officer will absolutely control the work of sanitation. It is his true position and the expert knowledge which he has acquired is thus recognized, and with it increased authority is accorded; with this his responsibilities are increased stimulating him to greater effort to protect the health of the soldier, and incidentally giving him an opportunity to add to the credit and prestige of that profession, noblest in its aims, and most far reaching in its field of usefulness.

MEDICAL LEGISLATION, SOME SUGGESTIONS FOR THE ARIZONA MEDICAL ASSOCIATION.*

C. E. YOUNT, M.D., PRESCOTT, ARIZONA.

Medical legislation is older than Legislatures, it antidates the medical profession by centuries, its conception is evident in the religion of Budda and Confucius, and the laws of Moses; in fact, it existed when the office of priest and physician were yet one.

The evolution of medical legislation from these early ages to the present, would furnish volumes of history. It is not to this distant past, however, that I would direct your attention. Rather let us inquire, "How is it with us to-day in Arizona?"

The medical profession of the United States, though not wholly united, has a most formidable army of scientific men in the American Medical Association which it may mobilize at any time and place. The very halls of Congress have felt the onslaught of this resistless host. Early and frequent defeats were discouraging, but now victories are more frequent and each year seems to bring new prizes in the shape of needful legislation; yet the final triumph is in the distant future, when we sha!l have a National Department of Public Health with a Director in the President's Cabinet.

I ask you gentlemen of the Arizona Medical Association, "Are we alive to our duty toward National Legislation?" So long as we remain a Territory we may be bound, but not gagged, so long as we have breath our voice must be heard without our borders.

If then as a Territory we have so little voice in national matters, what is our own condition as regards medical environment? I have been surprised in studying the reported efforts of other States, to note how much some of them lacked in wholesome legislation and by

comparison with some States, Arizona's excellent equipment. It really seems that we have laws enough, quite enough to be chaotic, but how to make them operative and effective is our greatest need.

The National Pure Food and Drug Law is in force in Arizona, but I ask you if any violations have been noted who would note them? The statute provides that the article in question may be submitted for examination by the chief health, food or drug officers of any State or Territory, or of the District of Columbia. Has our Superintendent of Public Health any money at his disposal for such collection of specimens? The United States Government Laboratory at Washington will make the chemical analyses but what provision is made for the regular and systematic investigation of these foodstuffs and drugs shipped into the Territory? I believe that we have an opportunity to be of great assistance to our Superintendent of Public Health and materially assist in broadening his sphere of usefulness.

NARCOTIC DRUGS.

It has doubtless occurred to all of you who practice among the "Submerged Tenth" that our law governing the sale of morphine and cocaine, etc., is too lax; simple registration by the purchaser stating the purpose for which the drug is intended is not sufficient. Many States have recognized this and within the last two years no less than four States have made it impossible to get cocaine without a doctor's prescription, and this prescription may not be refilled without the doctor's consent. At the Phoenix meeting of this Asso-

^{*}Read before the Arizona Medical Association, April 28, 1908.

ciation in 1906 resolutions covering the above were passed, but like some other good intentions they seem only to pave the streets of Hades. I would urge legislation in the matter, first, because I consider it expedient for our social betterment, and second, because if we don't champion this movement the Territorial Board of Pharmacy will wrest the laurel from us and introduce such a bill.

Located in the arid regions with a most enviable reputation for the climatic treatment of the tubercular, Arizona should have in her statutes some provision tending to inhibit the spread of tuberculosis among our people. It is proven conclusively that neither nativity nor residence here furnishes immunity to this disease. Hence, if our Territorial Board of Health was empowered to require registration of tuberculars and disinfection after them it would add much to our personal safety. In our law, "An Act to Protect Public Health," it is relegated in section 4, paragraph 3, to the Territorial Board of Health, and should we as an Association desire such a regulation I know that all that would be necessary would be to make our wants known to our Superintendent of Public Health and offer him our loval support. Now that I may be better understood in the matter may I quote Dr. John R. Haynes of Los Angeles concerning a personal experience demonstrating the need of railroad disinfection.

"A year ago when I was crossing the continent, a passenger who bore all the ear-marks of advanced pulmonary tuberculosis, hollow cough, expectoration, emaciation, shallow, rapid respiration and hectic flush—entered the Pullman sleeper. In the morning he was the last one to arise and when the curtains of his berth were removed I saw that the window at the head of his berth was so covered with sputum that the glass was translucent instead of

transparent. What possessed the man to expectorate against the window I do not know. He left the car soon after rising and the porter cleaned the window in the perfunctory manner common to men filling his position. On returning to my seat after a couple of hours' stay in the smoker I found that a woman and a little girl had been assigned to the berth just vacated by our tubercular passenger, and the little girl was standing on the seat looking out of the window with her face pressed against the pane and, as is the common custom among children, touching it with her tongue and lips.

"On another occasion when I was coming from the East, a man and wife and two children entered the car at Los Vegas and occupied the drawing-room from which had emerged a passenger so emaciated and feeble that he had to be supported on both sides and whose cough all through the long night had driven sleep from many of us. This man had lived in that drawing-room during the trip from Chicago to Los Vegas. What a frightful uproar would ensue if a leper were brought into a car, and how very soon would he have the car to himself! Yet the danger from the tubercular passenger is many times greater."

One case from my own experience to demonstrate the necessity of room disinfection after tuberculars. I was called to see a patient with advanced tuberculosis, occupying a room in one of the cheaper lodging-houses of Prescott. It was just dusk and as I stepped hurriedly across the room to place my hat on the dresser he exclaimed, "Look out, Doc! You will step in that stuff." He was too feeble (or lazy) to get up and as no receptacle was convenient discharged "wad" after "wad" of the most nauseous sputum on the floor of his room. He left for the South that night—but what of the poor fellow who next occupied that room, or what of the chambermaid who attempted to clean up after this patient. These are extreme and disgusting citations but serve the better to demonstrate the absolute need in this direction.

In at least three counties, Maricopa, Yavapai and Pima, the care of indigent tuberculars who come to us from other States East, North and South, has placed upon us a peculiar economic burden. Possibly this is but the just tribute we pay for our popularity as a climatic resort for tuberculars. However, it would seem that the restriction of immigration of indigent tuberculars should be encouraged. If legislation to that effect having as its object deportation seems too harsh and altogether out of place, at least let us educate the profession to see that it were better such cases remain at home, than to die in County Hospitals. our ill-equipped (See Texas.)

Turning from the "Great White Plague," I would ask you to consider for a moment "The Great Black Plague" or venereal disease, which in our zeal to check the former we have somewhat neglected. "Suffice it to say that next to tuberculosis, and possibly not excluding it, venereal disease is the most serious problem with which society has to contend. From the medical, political, social and economic points of view, venereal disease looms up as the greatest of all terrors to society. A terror not only to him who has been infected, but to all with whom he comes in innocent contact, and even unto the generations that follow him. Making due allowance for the difference in the character and manifestations of the venereal diseases and tuberculosis, we can and must adopt similar measures in an attempt to diminish the far greater ravages of the diseases of venery, and the methods that have been productive of success in the fight against tuberculosis will likewise succeed in the campaign against these social diseases."

(A. L. Wolburst, M.D., Boston Medical & Surgical Journal, Sept. 13, 1906.)
RECIPROCITY.

reciprocity between Medical States, while a consummation devoutly to be hoped for, is at present only a goal toward which we may press. The Federal Constitution relegates this to State's rights and Dr. Joseph D. Bryant (J. A. M. A., Vol. XLVIII. No. 23) says: "Fair and equitable relations, founded on uniform standards, should be established between the respective States, regarding the requirements of medical education. Under this arrangement fully qualified physicians going from one State to another would not be obliged to submit to annoying State board scrutiny concerning fitness to practice medicine. Since no unusual professional attainments are necessary to meet the exigencies of practice in any State in the Union, but little difficulty should be experienced in establishing a grade of educational requirement, permitting of practice through reciprocal comity."

Dr. Charles A. L. Reed, chairman Committee on Medical Legislation, American Medical Association, tersely reviews the situation as follows: "The unsatisfactory condition of medical licensure in the United States has been the subject of consideration and protest by every medical man and by every medical organization in the country for the last quarter of a century. grounds for protest are: (a) that the requirements for license differ in the different States; (b) that the State examinations are all arranged to test the qualifications of recent graduates and are in consequence not adapted as tests of qualification of graduates of longer standing; (c) that reciprocity between the States is as yet very limited, thus imposing undue hardships on those who may find it necessary or desirable to move from one State to another, and (d) that even between States that

reciprocate on the basis of examinations there is no reciprocity on the basis of licenses issued before examinations became a requirement." (A. M. A. Bulletin, Vol. 3, Jan. 15, '08, No. 3.)

In New Hampshire, House Bill 17 amends the Medical Practice Act by providing for reciprocity with other States which will grant to the physicians and surgeons of New Hampshire similar privileges.

Illinois leads the States. She reciprocates in case of physicians' licenses issued after examination, with nineteen States. Illinois does not reciprocate in the case of license issued on the presentation of diplomas without examination.

The Secretary of our Board of Medical Examiners says: "As to reciprocity of medical licenses. I have a rather decided opinion that it will not be to the advantage of Arizona to reciprocate. California will not, and I think that her judgment in the matter would be a good guide for us. They would be swamped with Eastern medical men of every standing; good, bad and indifferent. We would undoubtedly experience the same thing here. Moreover, the States would demand reciprocity from us but would hesitate to grant it to us as long as we are a Territory, inasmuch as they would undoubtedly not have a very exalted opinion of our standing."

VITAL STATISTICS.

The medical fraternity of the Territory has been provided with copies of an act entitled, "An Act to Protect Public Health," and you are therefore familiar with the law governing vital statistics. You may also have noted Arizona's rating based on the report of Vital Statistics as given in the "Report of Census Office," "Mortality Statistics" or Dr. Cressey B. Wilbur's article (Journal of American Medical Association, January 26, '07) "Legislation for Vital Statistics." Arizona is "not yet accepted as a Registration State." She is not alone. There are thirty-three

other States in the same catagory, representing 51.2 per cent. of the total estimated population of the United States. "Nearly all the States not yet accepted as registration States have now or have at some time possessed laws IN-TENDED to secure the complete registration of deaths. These laws have usually been defective in principle, though in some instances faulty administration may have been to blame for failure to secure results." "The present unfortunate condition of the United States as practically a non-registering country, causing it to be classed with the interior of Africa and other uncivilized regions of the globe from which no vital statistics are obtainable, cannot indefinitely continue. Although the Federal Government has endeavored to secure vital statistics in connection with the decennial censuses of population since 1880, the method of attempting to enumerate births and deaths is necessarily a failure, and will be entirely discontinued in the future. Beginning in 1880 the registration records of certain States having fairly accurate systems of immediate registration of deaths, with the provision of compulsory burial permit, were substituted for the enumerators' returns, and with the growth of efficient State laws and municipal ordinances the registration area for deaths has increased until the present time. The establishment of the Bureau of the Census upon a permanent basis has enabled it to be a much more influential factor than formerly in the promotion of adequate legislation, and since its active efforts began in 1902 the amount of satisfactory State legislation has rapidly increased." (Bulletin Census, 1906.)

Now, just what are the necessary elements of a satisfactory registration law for deaths? "As formulated by a committee of practical registration officials representing the American Public Health Association and co-operating

with the Bureau of the Census," they are as follows:

- 1. Deaths must be registered immediately after their occurrence.
- 2. Certificates of death (standard form) should be required.
- 3. Burial or removal permits are essential to enforce the law.
- 4. Efficient local registrars (properly compensated) are necessary.
- 5. The responsibility for reporting deaths to the local registrar should be fixed.
- 6. The central registration office should have full control of the local machinery, and its rules should have the effect of law.
- 7. The transmission and preservation of records should be provided for.
- 8. Penalties should be provided (and enforced).

"The burial permit is the absolutely necessary check on the registration of deaths and the only one by which efficient and complete operation of such a law can be secured. If registration is deferred, and undertakers are allowed to inter or to remove bodies without permits with the understanding that the deaths shall be registered or enumerated at some subsequent time, the result will be that many deaths will never be registered. The immediate local registration of deaths, with the safeguard of a burial or removal permit, necessarily implies that there shall be a local registrar to receive the certificate of death and to issue the permit. This official should have a limited district, and should exercise supervision over it, under the general direction of the central registration office of the State. Only in this way can it be certain that no deaths escape registration through violation of the law, and the central office can thus be able to insure uniform and complete registration for the entire State area. Returns of the original certificates of death should be made monthly by the local registrar to

the State registrar affording the most authentic and satisfactory legal records and statistical data for sanitary purposes.

February 11, 1903, the following joint resolution was adopted by the Federal Congress and you must see that our National Government desires that each of its fifty-one political divisions should have adequate registration of births and deaths. It is in the following words:

Whereas, the registration of births and deaths at the time of their occurrence furnishes official record information of much value to individuals; and

Whereas, the registration of deaths, with the information upon certain points, is essential to the progress of medical and sanitary science in preventing and restricting disease and in devising and applying remedial agencies; and

Whereas, all of the principal countries of the civilized world recognize the necessity for such registration and enforce the same by general laws; and

Whereas, registration in the United States is now confined to a few States, as a whole, and the larger cities, under local laws and ordinances which differ widely in their requirements; and

Whereas, it is most important that registration should be conducted under laws that will insure a practical uniformity in the character and amount of information available from the records; and

Whereas, the American Public Health Association and the United States Census Office are now co-operating in an effort to extend the benefits of registration and to promote its efficiency by indicating the essential requirements of legislative enactments designed to secure the proper registration of all deaths and births and the collection of accurate vital statistics, to be presented to the attention of the legislative authorities in non-registration States, with

the suggestion that such legislation be adopted: Now, therefore,

RESOLVED BY THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED, That the Senate and House of Representatives of the United States hereby expresses approval of this movement and requests the favorable consideration and action of the State authorities, to the end that the United States may attain a complete and uniform system of registration.

The American Bar Association is assisting in this important work and through its "Special Committee on Vital and Penal Statistics" is making drafts of proposed registration laws.

The Bureau of the Census heartily welcomes this co-operation and will be pleased to be of service to the committee, to the conference and to the American Bar Association, and also to the individual lawyers and members of Legislatures in States undertaking the enactment of registration laws. The following publications may be of interest and will be sent upon request:

No. 104. Registration of Births and Deaths. Drafts of Laws and Forms of Certificates.

No. 106. Extension of the Registration Area for Births and Deaths. A Practical Example of Co-operation Census Methods as Applied to the State of Pennsylvania.

Drafts of laws especially adapted to individual States will be prepared by the Bureau of the Census at the request of and in co-operation with the State authorities, and projected bills will be critically examined, upon request, and opinions given as to their practicability.

You have heard the indictment against us; you have learned of the proffered assistance. I ask you, gentlemen of the Arizona Medical Associa-

tion, whether you desire that Arizona continue to remain longer among those "not yet accepted as Registration States" or will you, by assisting in needed legislation for vital statistics in this way demonstrate to the National Government and the American Medical Association that we have this new qualification for Statehood? (New Mexico and Oklahoma have not.)

A Territorial Chemist and Bacteriologist, each with a properly equipped laboratory, could be of great assistance to the Superintendent of Public Health and they could make our "Act to Protect the Public Health" more effective. I think that I can show you that this is not utopian. The University of Arizona or its Experiment Station can furnish the equipment. And the salary for two scientists? You ask how an over-taxed Territory may meet further indebtedness? I answer that Hon. Albert J. Beveridge has pointed out the method. He did not intentionally do "Arizona the small" a good turn, but he unconsciously did so when he called the Senate's attention to the fact that "this under-taxation," applies to all the mining interests of the Territory. In other words, while the mining companies are taking from Arizona its chief source of wealth, they are not helping to bear their just share of the burdens of taxation, and according to his figures, the four largest copper producers in the Territory were assessed in 1905 at 7 per cent, of their "net value annual dividends." Collect from these companies anything like a reasonable tax and Arizona can have funds for the finest school system in the United States and a few thousand annually for the salaries just mentioned.

The time limit makes it impossible to deal with our relation to legislation governing Milk and Meat Inspection, Suppression of Rabies, Medical Expert Testimony, Osteopathic Board, "Corporation Practice of Medicine," and

many other matters of equal importance which are claiming the attention and best thought of medical associations in other States.

In conclusion, gentlemen, I desire to state that I do not wish to be classed either as a reformer or tinkerer, but, as the member of the National Legislative Council from Arizona, it is my duty to call the attention of this Association to matters which might require legislative action; and be it remembered that the technique of medical legislation has improved wonderfully in the past two decades. If, after careful study of existing statutes, you are of the opinion that our present laws are adequate for present conditions and that "The different States should stop tinkering until we know what we are doing, until we know what we want and then work for its attainment," (Dr. George Simmons, Bul. A. M. A., Vol. 3, No. 3, Page 131), this paper will have been unnecessary.

On the other hand, should you decide that we can and will better some parts of our statutes, then the way is plain. "When a measure is right and is backed by a healthy fighting spirit no amount of opposition can stop it. Medical men have kept out of the fight long enough. They owe a duty to the public confidence." (R. B. Newcomb, M.D., LL.B., Cleveland Medical Journal, January, 1908.)

"It is now more important that the organized profession, individually and collectively, study the laws we have and the laws we need to have, than that we study a new remedy, or while away our time in the discussion of a new theory of some old disease. The world will more nearly appreciate the high altruism and humanity of medicine when the profession shall have determined upon and had enacted into laws those concepts of medical progress that are known to be for the public good." (Dr. A. H. Madry, K. C. Med. Lancet-Index, January, 1908.)

To this end I can offer no better suggestion than that this Association appropriate sufficient money from its treasury and authorize its Secretary to assist in putting in pamphlet form under one cover all the statutes dealing with medical and quasi-medical subjects that we may act with intelligence after mature deliberation, and not as "fools rush in where angels fear to tread."

DISCUSSION.

DR. COLEMAN:-Some months ago I had printed a copy of the laws established for the Board of Health in the Territory, and I had it sent to all the doctors in the Territory. I think that many of the physicians never knew before that there was such a law in the Territory, and certainly they had not been obeying it. The law is not all that could be desired but it is pretty well adapted to any settlement or town. While this law has been passed five years we have not lived up to it, and we have not gathered sufficient data to formulate a

better one.
Only for about a year have we been gathering vital statistics, and I think that by gathering these statistics a year or two more, gathering these statistics a year or two more, we will then be in a better position to have a better law, and I hope to see it in print so that we may study it, and to have some laws passed that will be of benefit.

I believe the Pullman cars are fumigated at the ends of the trunk lines. Sometimes, but not always, they are fumigated on this line. It should be incorporated in our law.

An appropriation should be made for the expense of the Health Board for gathering and recording the vital statistics at a place which each county appoints, for recording the vital statistics of that county.

I believe there are few deaths but that are I believe there are few deaths but that are reported. The undertakers are helping us out in that. I do not know of a place where an undertaker will bury a body without a death certificate. But so far as getting vital statistics of births I do not believe that more than half of the births are recorded. The physicians may report the ones they attend, but I do not believe they attend more than half the births in Pima County. half the births in Pima County.

DR. KAULL:-On a trip to California I tried of the porter refused to let me have that one, saying that a consumptive had come all the way from Chicago in it and that it had not been fumigated. I do believe they are careful about fumigating the Pullman cars.

DR. PALMER:-No narcotic drug should be sold by a druggist without the written pre-scription of a physician, nor should the prescription be re-filled without a written order from the physician.

DR. FOSS:—People are not careful about fu-

DR. FOSS:—People are not careful about runigating after consumptives. There was a case of a young lady in Phoenix whose parents kept a rooming-house, who contracted the disease from, I believe, inhaling the dust, and coming in contact with the spittle, which these people are so careless about. They usually spit where it is most convenient.

This young lady was advised to quit teaching. She was at that time a teacher in the ing. She was at that time a teacher in the Phoenix public school, so she said "I will go to California where I can teach if they won't let me teach here." She went to California, and taught up until two months of her death. DR. YOUNT:—Cocaine, morphine, etc., should not be sold by a druggist without a

written prescription from a physician nor the prescription refilled without a written order from the physician.

Places should be disinfected after all tubercular people. There has been an ordinance to that effect passed in Prescott. At present the owner has to pay for the disinfecting, but in time we look to get the city to do so,

EFFECTS OF FAULTY EYE, EAR, NOSE AND THROAT CONDITIONS UPON THE MENTAL DEVELOPMENT OF SCHOOL CHILDREN.

BY HERBERT F. TRUE, M.D., LOS ANGELES, OCULIST AND AURIST, LOS ANGELES CITY SCHOOLS.

Compulsory attendance at school is fast becoming the law of the various States. We are thereby often requiring a child to attend school when he possesses some physical defect of sight, hearing or bodily ailment, of which he is not aware but which makes school life distasteful and a burden; and which might easily be detected and cured by a skillful physician. The State should demand attendance at school on the part of those for whom the schools exist, but it should also see to it that no child should be in school blindly suffering from a defect that could be cured.

A child physically defective so that he cannot succeed well with his studies and gets behind his class grows to dislike school. It would be better to prevent dislike for school and truancy than to have truant officers and reformatories. It is better to lead the child in the right way by skillfully correcting all physical or mental defects when possible and surrounding him with the proper environment, than to build walls of prohibition and costly State penitentiaries. Do not wait until a criminal is made to reform him. Train him so he cannot become one. Truly much is being done for the education of children, but much more can be done by the discovery and correction of defects.

To properly consider the various eye,

ear, nose and throat conditions, their effects upon the child, and how we believe these effects are produced, would be to cover the entire field of the specialist, and would take hours to even introduce the subject. So I must content myself with merely enumerating some of the evils attendant upon faulty conditions of the eye, ear, nose and throat, that we have found among the school children of this city; and to leave to my hearers with their knowledge of the human body, their scientific judgment and their keen medical insight as to what effect, this or that faulty condition, would have upon the child and his mental and physical growth. for instance, the symptom headache; the mere mention of this as I enumerate it as one of the evil effects of a faulty condition, immediately brings to the mind of the physician, or in fact any intelligent person, its many causes and its detrimental effects upon the sufferer. It distracts his attention and makes him lose interest in all subjects, except the headache itself and means for its relief. The power of application and concentration is lost. Consciously or unconsciously, he seeks relief from the cause of his distress; avoiding that which he believes to be the cause, even going to extremes, as we shall later show.

First, let me enumerate those enemies of the student (be he school child or

adult) that we see entering through the gateway of faulty conditions of the eves: Headache, watering, blurring, poor distant vision, vertigo, nausea, restlessness, pain in the eves themselves. inflammation of the lids and of the parenchyma of the eye, squinting; and reflexly, palpitation of the heart, chorea, stammering, mental confusion, backaches and dyspepsia. Any one of which will take the attention away from school work. Numerous as they are, the causes of most of these distressing conditions are comparatively few, myopia, hypermetropia, astigmatism and heterophoria about covers the list.

Many a boy or girl who gets on indifferently in school, gaining a reputation for dullness or indolence, is prevented from going forward by his imperfect vision, a condition of which his parents, instructors and he himself may be ignorant. Yet while he is ignorant of the fact of his imperfect vision, he is conscious of its evil results. How is the child to know that the blurring page, the watery eyes and the aching head which follow any protracted use of his eyes are not the common lot of mankind? This has been his experience. Why should it not be that of his fellows also?

Second, through the gateway of faulty ear conditions, enter earache, annoying discharges and deafness. Defective hearing is a great barrier between the teacher's efforts and the child's receptiveness, and is the cause of much apparent inattention and stupidity on the part of the pupil. Again, very often no one knows of the defect: the pupil thinks he hears as well as others. Of course, this does not apply to marked cases, but only to the undetected ones. We frequently find as high as thirty per cent, of this class existing in certain schoolrooms. The child's lack of ready response is laid up against him, as stupidity and sometimes even as perverseness; when it is due simply to

his not hearing distinctly what is told him. The parent or teacher thinks his hearing not at fault, because at times he probably hears much better than at others, which is true of most cases of bad hearing. Also, one ear may be defective while the other is not; and when the good ear is turned to the speaker, perfect hearing is experienced and prompt response is had; whilst when the defective ear is turned, his lack of ready response is attributed to inattention, disobedience, or even stupidity.

Third, through the gateway of faulty nose and throat conditions, again we see very frequently entering, headache, as a common symptom of many forms of intra-nasal disturbances especially when resulting from pressure on the soft parts by projections from the septum or swelling of the turbinals or inflammation of the sinuses. Limited or difficult breathing frequently occurs in faulty conditions of the nose and throat, as does a tendency toward the development of catarrhal conditions of the lower respiratory tract.

We have been told so often regarding the dangers to the mucous membrane of the entire respiratory tract, to the ears, to the formation of the face, to the general health of the patient and especially to the nervous system; of the presence of adenoids and enlarged tonsils, that I will not reiterate. I would only wish to call your attention to the lack of mental application and loss of memory found in this class of patients. This much is bad enough, but in addition, the child very often is not given the opportunity for mental exercise and development, by his associates, because he is thought to be very stupid, when in reality he may not be so. Especially is this true in those cases of typical, dull, listless adenoid face so easily recognized by the physician but not so by

Thus, I have only enumerated the effects of faulty conditions of eye, ear,

nose and throat; all of which tend to hold the child back in his studies, distract his attention from his work and render him less able to cope with the tasks set before him, than his fellows. Once he realizes this, his spirit for the attainment of perfection and the approval of his elders wanes, and his interest goes elsewhere, usually to worse things or trivial matters. Sometimes, however, it seeks the proper vent indicated by the call of nature and he flees from the place of his torment, namely, the schoolroom; because, there, he knows his distress is greatest and his unhappiness the most marked. child becomes a truant, naturally and properly so. He should be a truant, nature should rebel, until help is given him and the faults from which he suffers, eliminated. And in the few cases where this cannot be accomplished, an easier or special course laid out for him, such as is now being given in the ungraded rooms, which are in so many of the city schools. In addition, in most of those cases, I believe that it would be wise to give them out-of-door work during part of their school hours under the guidance and direction of a teacher. By following this plan, I firmly believe great good can be accomplished, especially in this particularly wonderful climate, and over in the less clement climates of other localities upon such days as the weather permits.

In the examination of 5321 school children in this city, 2241, or 61 per cent., were found defective in eyesight; 1170, or 22 per cent., defective in hearing; 1835, or 31 per cent., had adenoids; 1390, or 25 per cent., had enlarged tonsils.

Besides the above, many diseased conditions of these important organs were discovered.

In the examination of fifty bright pupils and fifty dull pupils selected by six teachers on account of their marked brightness or dullness, eight bright ones were found defective in some condition of the eye, ear, nose or throat; and forty-three of the dull ones had some easily detected and marked defect of these organs. This proportion speaks for itself. The dull ones are the defective ones, and the defective ones are the dull ones. As these little ones were lined up, the practiced eve of the physician could see at a glance, that this one or that one had some physical defect, and in most cases the diagnosis could be reached without a detailed examination. Upon the tests being applied additional defects were discovered.

I have considered this subject mostly from the effect these conditions have upon the mental development of the school child, leaving to your consideration the effects these conditions have upon the physical conditions of the child; for we all know full well how slowly these children develop physically, when encumbered with the load-stones of the defects that I have enumerated; and again we know how dependent mental advancement is upon a satisfactory physical condition.

It is the object of the medical examiners of the city schools to point out to the parents the fact that this child or that has some defect, so that they may bring the child to the attention of their physician. And by his efforts and the co-operation of the teacher in sustaining and encouraging the child until he regains his normal status among his fellows, we shall accomplish the most good for these little ones who are behind the others and whose sensitive natures feel it more than we know.

So let us all work together to discover and remedy the defects and then the physical and mental development will attain its maximum, in so far as the inherent natural ability of the child will permit.

410 Auditorium Building.



A MEDICAL, CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE.

Established in 1886 by WALTER LINDLEY, M.D., LL.D., Editor and Publisher.

This journal endeavors to mirror the progress of the profession of California, Arizona and New Mexico.

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Address all communications and manuscripts to

EDITOR SOUTHERN CALIFORNIA PRACTITIONER. Subscription Price, per annum, \$1.00.

144 South Hope Street, Los Angeles, California.

EDITORIAL

THE PROLONGATION OF LIFE.*

This volume is attracting the attention of thoughtful people throughout the civilized world, many claiming that it deserves a place beside Huxley's Essays.

How many regret that just as they are well equipped for useful lives the incapacity of senility overtakes them? It is not the prolongation of life alone that is desired, but rather the prolongation of usefulness. Here we give not a review of Metchnikoff's work, but some salient extracts from it.

In old people the thyroid and suprarenals frequently show cystic degeneration. It is quite probable that these so-called vascular glands have their share in producing senility, but do not form a predominating cause. A syphilitic child is a miniature old man. It is no mere analogy to suppose that human senescence is the result of a slow but chronic poisoning of the organism.

Some animals complete their cycle of life from birth to death in 50 or 60 hours, whilst others, like some reptiles, live more than 100 years, quite possibly two or three centuries.

Human beings who reach extreme old age may preserve their mental qualities notwithstanding serious physical decay.

The hair on the temple of a man 61 grows at the rate of 11 mm. in a month and on a boy from 11 to 15 years old it grows at the same rate, while on the young man from 21 to 24 years old it grows at the rate of 15 mm. per month.

^{*}The Prolongation of Life: Optimistic Studies. By Elie Metchnikoff, Sub-Director of the Pasteur Institute, Paris. English Translation. Edited by P. Chalmers Mitchell, M.A., D.Sc., Oxon., etc. Illustrated. Pp. 350. Net \$2.00. G. P. Putnam's Sons, The Knickerbocker Press, New York and London, 1908.

The nails grow in very old people. In the case of Mme. Robineau, the centenarian, the nail of the middle finger grew 2½ mm. in three weeks, while in a lady 32 years old, the corresponding nail grew 3 mm. in two weeks.

The human child requires 180 days to reach double its weight at birth, the horse doubles its weight in 60 days, a calf in 47 days, a kid 15 days, a pig 14 days, a cat 9½ days and a dog only 9 days. The author says the theory that has been announced of a relation between the duration of growth and longevity is not a sound one.

Animals which reproduce rapidly generally have a relatively brief duration of life.

Females frequently reach a great age. Women reach 100 years, or live beyond that time, much more often than men.

The cause of mortality in infants is in most cases maladies of the intestinal canal, produced by erroneous diet.

The fact that many men of from 70 to 75 years old are well preserved, both physically and intellectually, makes it impossible to regard that age as the natural limit of human life. Centenarians are really not rare. In France, for instance, nearly one hundred and fifty people die every year, after having reached the age of 100 or more.

Human beings may reach the age of 150, but such cases are extremely rare. Cases of duration of life from 100 to 120 years are not very rare.

Very frequently the husband and wife, although not related by blood, both attain extremely advanced age. This may be explained by the influence of method of life and surrounding circumstances,

In some mountainous countries there are numerous centenarians—the Balkan States, the French Pyrenees—but Switzerland is noted for the rarity of centenarians. It is more than likely that some circumstance in the mode of living influences longevity. Most centenarians have been poor, or in humble circumstances, whose lives were extremely simple. I have counted twenty-six centenarians, distinguished by their frugal life. Most of them did not drink wine, and many of them limited themselves to bread, milk and vegetables.

On the other hand Politman, a surgeon who lived from 1685 to 1825, was in the habit, from his twenty-fifth year onwards, of getting drunk every night, after having attended to his practice all day. Gascogne, a butcher of Tire (Hautes-Pyrenees), died in 1767 at the age of 120, and had been accustomed to get drunk twice a week. In spite of excessive coffee drinking there have been quite a number reached very old age. Voltaire's doctor warned him against this as a poison. "Well," said Voltaire, "I have been poisoning myself for 80 years."

Metchnikoff says a sound constitution and a simple and sober life are favorable to longevity, but apart from these there is something unknown that tends to longevity.

The author then advances his belief that old age is due to a peculiar species of intestinal flora.

"Is it desirable to prolong life?" the author asks. In France, in a population of about 38,000,000, there are 2,000,000

who have reached the age of 70. The support of these old people absorbs a sum of nearly \$30,000,000 per annum. It must be understood, however, that the prolongation of life would be associated with the preservation of intelligence and of the power to work. When we have reduced or abolished such causes of precocious senility as intemperance and disease, it will no longer be necessary to give pensions at the age of 60 or 70. As an economic measure the prolongation of life is desirable and it cannot be disputed that there has been a general increase in the duration of life, and that people live longer at the present time than in former ages.

The author gives instances of people living without the use of the large intestine which, he says, should convert the most skeptical critic of its uselessness. To eliminate the intestinal flora of the large intestine he believes would greatly prolong life. How can they be destroyed? Very little can be expected from disinfection with calomel et al. None the less, he says, I cannot regard the matter as definitely settled. More use can be made of simple purgatives which do not kill the microbes but eliminate them by the normal channel. Microbes enter the digestive tube in vast numbers with raw food, and in order to lessen the number of species in the intestines, it is important to eat only cooked food and to drink only liquids that have been previously boiled. Lactic acid fermentation is the great means of stopping putrefaction and butyric fermentation. In certain countries meat is preserved in acid skimmed milk with the result that putrefaction is prevented. Why should not lactic fermentation be used to arrest putrefaction in the digestive tube? The result of various clinical observations shows that lactic acid lessens intestinal putrefaction. Favorable results follow the use of lactic acid in many intestinal diseases, such as infantile diarrhoea, tuberculous enteritis and even Asiatic cholera. Lactic acid is also successfully used in the treatment of diabetes and tuberculous ulcerations of the larynx. Twelve grains can be given by the mouth daily. Intestinal putrefaction is to be combatted not by the use of lactic acid itself, but by the introduction into the organism of cultures of the lactic baccilli. The author names many countries where sour milk is the chief article of diet. The author then gives his method of souring milk:

After the milk has been boiled and rapidly cooled, pure cultures of the lactic microbes are sown in it, in sufficient numbers to prevent the germination of spores already in the milk and not destroyed in the process of boiling. The fermentation lasts a number of hours, varying according to the temperature, and finally produces a sour curdled milk, pleasant to the taste and active in preventing intestinal putrefaction.

This milk, taken daily in quantities of from 300 to 500 cubic centimeters, controls the action of the intestine, and stimulates the kidneys favorably. There are many useful microbes, amongst which the lactic bacilli have an honorable place.

The author concludes this section of this volume by asserting that our precocious and unhappy old age is due to poisoning of the tissues (the greater part of the poison coming from the larger intestine inhabited by numberless microbes), it is clear that agents which arrest intestinal putrefaction must at the same time postpone and ameliorate old age. Lactic bacteria can render a great service in the fight against intestinal putrefaction. This view is confirmed by the collection of facts regarding races which live chiefly on soured milk, and amongst which great ages are common.

The above running notes give the gist of the theory presented by this author. It is undoubtedly full of interest. He fortifies his position by an array of facts that well justify a careful reading of the work.

IS UNDIGESTED PROTEIN ASSIMILABLE?

Until recently it was believed that protein must be broken down into its cleavage products before it can be absorbed from the alimentary tract. This view seemed to be supported by the fact that animals may be kept in nitrogenous equilibrium on a diet consisting of final forms of protein hydrolysis. The passage of native protein through the intestinal wall has been looked upon as a pathological process although clinical observation extending over many years has assigned positive value to rectal enemeta of egg-white, and the early experiments of Voit pointed to the absorption of unchanged protein.

More exact methods of investigation and more detailed knowledge of the chemistry of the proteins have made recent contribution to this subject possible. During the past and current years this problem of assimilation of protein has been studied by Dr. Cramer of the University of Edinburgh. In many of his experiments simple vet exact methods were employed. People and some of the lower animals were fed foreign native protein in abundance and the urine examined for the presence of the protein, a positive finding naturally being considered as evidence of absorption in an unchanged form of the protein fed. Egg-white was among the proteins studied. In all instances and under conditions comparably normal some of the protein ingested reached the blood stream in its native form. One series of experiments may serve as an illustration. "Six healthy people who had received six raw eggs each from morning until noon all showed egg-albumin in the urine."

From Dr. Cramer's experiments we are not to infer that it is possible to dispense with protein digestion, but that a small yet appreciable amount of protein may pass through the intestinal wall unaltered. Absorption of undigested protein appears from these studies to be a physiological process supplementing that of absorption of the more advanced products of digestion. It is possible that in assimilation of native protein from the intestinal tract we have another example of a biological factor of safety, a means of allowing some protein to reach the blood stream should the usual process of digestive L. B. S. preparation be deranged.

MEDICAL LEGISLATION IN ARIZONA.

We wish to call the attention of the members of the Arizona Medical Association to the articles on "Vital Statistics" and "Medical Legislation in Arizona," in this number of the Practitioner.

It is very probable that Arizona will be admitted to Statehood at an early date, and a systematic effort should be made to have her begin her career as a State with good health laws.

We have the decided advantage of being able to profit by the experience of the older States in this regard. The committee on Public Policy and Legislation, of the Arizona Medical Association, is considering just what medical laws it will be wise to ask for at the next session of the Arizona Legislature, and an account of its work will appear in an early number of the PRACTITIONER.

In the meantime, however, the medical profession of Arizona is urged to prepare to present a united front in favor of rational medical legislation at the coming session, and to endeavor to have elected to both houses only such candidates as will favor such legislation.

J. W. F.

THE CALIFORNIA EXAMINATIONS.

Just as this issue of the SOUTHERN CALIFORNIA PRACTITIONER goes to press the daily papers are publishing sensational articles about unfairness in the examinations by the State Medical Examing Board at the August meeting in San Francisco.

The applicants from the College of

Medicine of the University of Southern California, and from the College of Physicians and Surgeons of Los Angeles made a poor showing, the former going a little above 50 per cent, and the latter a little below 50 per cent. As to the charge of fraud by the examining board we do not entertain it for a minute. J. Park Dougall, who is the Eclectic member and the President of the Board, has as his associate in his office Dr. D. D. Nice. The latter established a quiz class composed of physicians who were to and did appear before the State Board. Dr. Nice charged \$100 to each applicant. Dr. Dougall lectured before this class. A number of the members of this class conceived the idea that being so close to the President of the examining body gave them some peculiar advantage over those who were not so favored. When they found that they had failed they were sorely disappointed.

Dr. Dougall was certainly lacking in a fine sense of the fitness of things in allowing his office associate to accept \$100 from applicants who were soon to be examined by him officially.

Dr. Dudley Tait in an interview says, "of course there was cheating and cribbing." Dr. Henry Gibbons says in an interview "there was no cheating." No doubt Dr. Gibbons believes he is right, but there is also no doubt Dr. Tait is actually right. From what we have heard cribbing and other forms of cheating are almost universal in these California examinations. In other words, as now conducted they offer a premium on deceit, fraud and trickery.

The Southern California Prac-

TITIONER has always maintained a belief in the absolute honesty of our Board of Examiners. Sometimes the graduates of one college have received a high grade in these examinations and sometimes another college has carried off the honors, but through it all we have had faith that there has been no favoritism.

For the honor of the medical profession the State Board should see to it that there is no temptation nor opportunity to cheat.

EDITORIAL NOTES

Pardon all but thyself.

Dr. Frank Morris has located in Covina.

Dr. V. A. Smelker has located in Nogales, Ariz.

Dr. D. W. White is practicing at Stanley, N. M.

Dr. George Bahrenburg has again located in Los Angeles.

Dr. Herbert F. True has been taking his vacation in the East.

Dr. Frank Lee, formerly of St. Louis, has located in McIntosh, N. M.

Dr. Henri St. John has been appointed County Health Officer.

Dr. W. A. Weldon of San Pedro has been on a bear hunt in Oregon.

Dr. C. D. Hubbard has established an office in Huntington Park, Cal.

Dr. Arthur W. Buell (Homeopathist) has located in Long Beach, Cal.

Dr. Harvey Smith is Health Officer of Calexico, Imperial County, Cal.

Dr. W. B. Sawyer of Riverside was recently called professionally to Azusa.

Dr. Charles W. Fish of Los Angeles took his vacation in California's mountains.

Dr. Arthur A. Libby of Pasadena is taking a motor tour through New England.

Dr. P. B. Caler of Globe, Ariz., spent a few of the August days in Los Angeles.

Dr. R. T. Rolph of Octave, Ariz., spent a few days in Prescott last month.

The heart of an elephant, that died recently in the New York Zoo, weighed 47 pounds.

Dr. G. C. Nichols is practicing in Orange, Cal., in conjunction with Dr. D. F. Royer.

Dr. John W. Elder of Albuquerque was recently called professionally to Los Angeles.

Dr. E. O. Palmer of Hollywood has been taking a week's outing in Northern California.

Dr. F. L. Rogers of Long Beach has been very ill but is again attending to his practice.

Dr. J. K. Swindt of Pomona is devoting two months to surgical work in Chicago hospitals.

Dr. J. T. Stewart is now located in his new home, 2319 West Eleventh Street, Los Angeles.

Dr. E. W. Baum of Bisbee, Ariz., with his family, is spending his vacation in Los Angeles.

Dr. J. W. Coleman, Territorial Health Officer of Arizona, has been very ill at his home in Tucson.

Dr. Virgil McCombs has been appointed County Health Officer with headquarters at Imperial.

The Psychologist says: As Deep calls unto Deep, one bad passion awakens another.

Dr. A. L. Gustetter of Nogales, Ariz., is spending a few weeks with the Drs. Mayo at Rochester, Minn.

Dr. Herman Janss and Mrs. Emma Braly, both of Los Angeles, were married Wednesday, August 19.

Dr. C. E. Standlee has been appointed Assistant Surgeon at the National Soldiers' Home near Santa Monica.

A recent reprint is Tuberculosis of the Tongue with Report of Case by Wm. M. Harsha, M.D., Chicago.

Dr. Clymer D. Jeffries of Williams, Ariz., was a delegate to the Territorial Democratic Convention at Prescott.

October 16 will be the two hundredth anniversary of the birth of Albrecht von Haller—physiologist, botanist and poet.

Dr. C. W. Decker of Los Angeles is again in his offices, Sixteenth and Georgia Streets, after a few weeks' vacation.

Dr. George H. Kress has moved from the Johnson to 240 Bradbury Building. Telephones: Home, A5774; Sunset, Main 478.

Dr. Frank L. Chapline of Orange and Miss Anna Roble of Los Angeles were married in the latter city on June 22.

Dr. A. B. Thach of Nashville, Tenn., has located in Yuma, Ariz., and is now physician to the Indian School at that point.

Most of the poisonous species of snakes bear their young alive—are viviparous, while many varieties of the harmless snakes lay eggs—are oviparous.

Dr. Leon J. Roth of Los Angeles is in Paris where he will spend six months in the hospitals and will then be six months more in the hospitals of Vienna and Berlin.

Dr. F. E. Shine, chief surgeon of the Copper Queen Hospital, Bisbee, Ariz., has returned after eleven weeks' absence in the East.

Dr. Harvey Gordon McNeil of Los Angeles has returned from a European trip. He spent the most of his time in the hospitals, Paris and London.

Dr. Charles D. Lockwood of Pasadena and Los Angeles, has been spending a few weeks in the New York hospitals.

Dr. A. W. Olcott, President of the Arizona Medical Association, visited the resorts of Southern California last month.

The value of an Absolutely Vegetarian Diet in Psoriasis is the title of a brochure by L. Duncan Bulkley, New York City.

Dr. E. T. Dillon announces that Dr. A. Burkelman will hold a Saturday afternoon eye and ear clinic at the Sisters' Hospital.

Mosquitoes and Their Relation to Disease in Hawaii, by E. S. Goodhue of Honolulu, Hawaii, is the title of an illustrated monograph.

Dr. H. B. Huff of Corona and Long Beach is strongly opposed to cranks. The one attached to his auto fractured his wrist a few days since.

The guests of the Pottenger Sanatorium on September 5 tendered a banquet and reception to Dr. and Mrs. Pottenger, it being their wedding anniversary.

Dr. Calvin B. Cowles, Jr., first lieutenant of the Medical Corps, U. S. A., has recently been a guest at the home of his cousin, Dr. J. E. Cowles, Los Angeles.

Dr. and Mrs. I. E. Huffman of Tucson, Ariz., have been visiting the various coast resorts of Southern California. Mrs. Huffman will remain for the summer.

Drs. Isaac Brewer and Mark A. Rodgers have been appointed members of the board of judges of the International Congress on Tuberculosis, for Arizona.

Dr. P. G. Cotter of Los Angeles has returned from an absence of several weeks in the East where he has combined his vacation with surgical work in the hospitals.

Dr. Mark A. Rodgers of Tucson, Ariz., will be out of town during the month of September. He will spend his vacation in San Francisco, and near-by resorts.

Dr. William McGill, who for sixteen years has been connected with the largest hospital in Seoul, Korea, has, in order to educate his three children, located in Hollywood.

Drs. E. R. Smith, M. L. Moore, John R. Haynes and A. C. Rogers, all of Los Angeles, have been spending a delightful month as guests of the Flat Rock Club, Yellowstone Park, Idaho.

Dr. W. B. Purcell of Tucson, Ariz., is away on a long hunting trip in the White Mountains, some 80 miles north of Clifton. He is accompanied by Dr. and Mrs. Henry Schell. Bear is the game,

Dr. W. S. Philp of Los Angeles and Miss Emma Sutton of Wheeling, W. Va., were married Wednesday, August 19. After a month's travel in the East they will be at home at 946 Beacon street, Los Angeles.

Dr. Orlando T. Pratt of Los Angeles died suddenly of heart disease August 12. He was a graduate of the Missouri Medical College, class of 1875, and had been practicing in Southern California for twenty-five years.

"Fulguration" is the name of the new treatment of cancer by means of spark rays of d'Arsonval's currents. High frequency currents with very high tension have been found by de Keating-Hart to have an undoubted influence on malignant tumors, causing necrosis and absorption. Dr. A. Morrison of Tucson, Ariz., recently spent three weeks on an auto trip through Pima, Cochise and Graham Counties. The doctor accompanied some insurance solicitors, and reports both business and pleasure.

Dr. R. F. Palmer of Mesa, Ariz., left for the East on August 18. He will spend a few weeks at the Cook County Hospital, Chicago, and later will attend the International Congress on Tuberculosis in Washington.

Dr. John W. Flinn of Prescott, Ariz., spent a short time last month in Los Angeles. He called it a vacation, but he was busy most of the time in hospitals and laboratories. Dr. Flinn is a careful student of vaccine therapy.

Dr. C. H. DeWitt of Glenwood, Iowa, has been taking his vacation in Los Angeles and at the same time devoting his morning hours to the hospitals. Dr. DeWitt graduated from the College of Physicians and Surgeons, Chicago, class of 1883.

Dr. W. V. Nichols, who has been a prominent practitioner in Oceanside, Cal., for sixteen years, is now president of the City Board of Trustees. Dr. Nichols graduated from the Medical Department of the University of Pennsylvania, class of 1885.

Dr. H. C. Richter is assistant surgeon of the Public Health and Marine Hospital Service at Calexico, Cal. His duty is principally the inspection of immigrants from Mexico. Dr. Richter has already refused entrance to quite a number of cases of trachoma.

Dr. J. H. Tebbetts, College of Medicine, University of Southern California, class of 1908, successfully passed the very stiff examination of the Arizona Board and is now located at Metcalf, Ariz., where he is in charge of an emergency hospital at the Shannon mines.

Lieut. C. E. Yount of Prescott, Ariz., qualified as a sharpshooter at Camp Brodie, and was selected a member of the Arizona team, to shoot at Camp Perry, Ohio. Later he will attend the International Congress on Tuberculosis at Washington, where he will act as a delegate from Arizona.

Dr. E. Myrtle Wellcome, a talented Los Angeles physician, and Mr. Edward A. de Blois, a merchant of Brawley, Imperial County, California, were married in Pasadena, August 20. Among those present was the bride's father, Rev. George T. Wellcome. After October I they will be at home in Brawley.

Dr. W. Jarvis Barlow has sent to the International Tuberculosis Congress at Washington some excellent models of the buildings that compose the Barlow Sanatorium. These models are perfect in detail and the construction of them employed the constant skill of Arthur W. Harris and J. W. Eyre for about four months.

The Journal A. M. A., in its valuable report on medical education, says: "The total number of medical students (matriculants) in the United States for the year ending June 30, 1908, is 22,602, a decrease of 1674 below 1907, and a decrease of 2602 below 1906." The decrease is probably due to the prevalence of Christian Science and Osteopathy.

Dr. J. M. Holden of Long Beach has established an office in Los Angeles in the Pacific Electric Bldg., corner Sixth and Main streets. He will continue to reside in Long Beach but have afternoon office hours in Los Angeles. Dr. Holden graduated from the College of Medicine of the University of Southern California in the class of '99.

Dr. James Kingston Fowler, in a recent address before the British Medical Association, says: "The new tuber-

culin is regarded as a remedy of unquestioned value in the treatment of lupus, tuberculous arthritis and other localized tuberculous affections." He says no definite conclusion has yet been reached as to its usefulness in the treatment of pulmonary tuberculosis.

Messrs. Lea & Febiger, successors to Lea Brothers & Co., Philadelphia, announce a new edition of Gray's Anatomy. It is the result of a thorough revision begun two years ago. In this work Professors J. Chalmers Da Costa and Edward Anthony Spitzka, who occupy, respectively, the chairs of Surgery and of Anatomy in the Jefferson Medical College of Philadelphia, have been associated.

The American Journal of Obstetrics has established a department of Pediatrics edited by Thomas S. Southworth, M.D., Attending Physician Nursery and Child's Hospital; New York City Children's Hospital (Randall's Island); The Hospital for Scarlet Fever and Diphtheria Patients; Physician Out-Patient Department, Babies' Hospital; member American Pediatric Association, American Medical Association, New York Academy of Medicine.

Dr. P. C. Remondino, the dean of the San Diego medical profession, on August 19 gave a reception at his residence to Dr. Charles W. Bryson, the dean of the College of Physicians and Surgeons of Los Angeles, and Dr. J. H. Seymour, the president of the same institution. The guests were almost all physicians. During the afternoon a committee of five physicians took Drs. Bryson and Seymour on an automobile trip that included Point Loma and other places of interest.

Dr. William Thorne died September 2 at his home in Covina, Los Angeles County. Dr. Thorne spent the last ten years of his life superintending a beautiful twenty-five-acre orange grove that

he owned at Covina. He was born in Winkley, Devonshire, Eng., eighty-nine years ago. He came to the United States in 1834, was graduated from the University of Buffalo in 1850, and located as a physician in Hastings, Minn., in 1857. It was in this last-named city that he practiced until coming to Covina in 1898. He was a member of the American Medical Association.

A reprint received is The Submucous Operation on the Nasal Septum by Dr. J. E. Mackentz, New York City.

Bulletin of the Bureau of Labor, No. 75, March, 1908, issued by The Department of Commerce and Labor, Washington, D. C., contains a valuable Treatise on Industrial Hygiene by Dr. George M. Kober of Washington. Dr. Kober enters carefully into the statistics of the death rate in many different employments but omits employees in breweries, distilleries and saloons. It is probable that any physician desiring a copy might receive one by addressing a request to the Bureau.

R. J. Elliott, a medical student, who has finished his first year in the College of Medicine of the University of Southern California, is trying to earn money enough for the second year, and to that end he is endeavoring to secure 1000 subscriptions to the Ladies' Home Journal and the Saturday Evening Post, at \$1.50 each. New subscriptions and renewals count the same. Any persons wishing to aid a worthy student in his efforts to secure an education are requested to forward their subscriptions to Mr. Elliott at 1414 South Hope street, Los Angeles. You thus give a worthy young man a lift and at the same time get quid pro quo. Do it now.

To spread a further knowledge of simple hygiene and to teach what to do in moments of danger, the American National Red Cross has arranged the following lectures. They will be given

with practical demonstrations, gratuitously, by the different physicians in the San Diego Club House: September 17, "Bruises, Wounds and Bleeding," H. C. Oatman, M.D.; September 24, "Dislocations and Sprains," H. N. Goff, M.D.; October I, "Fractures," T. L. Magee, M. D.; October 8, "Foreign Bodies, Burns, etc.," J. P. Lewis, M.D.; October 15, "Insensibility, Fits, etc.," R. L. Doig, M.D.; October 22, "Poisoning," E. Grove, M.D.; October 29, "Hygiene of the Sick Room," C. C. Remondino, M.D.; November 5, "Dietetics," R. E. Austin, M.D.; November 12, "Tuberculosis," J. A. Parks, M.D.; November 19, "Contagious Diseases," H. P. Newman, M.D.: November 26, "Mother and the Baby," Charlotte Baker, M.D.; December 3, "Emergencies, Medical and Surgical," Otto Klietsch, M.D.

A Province of Broussa on the southern shore of the Sea of Marmora is the great olive producing district of Turkey. They have six varieties of olive trees; three wild and three grafted. The wild trees produce after the eighth year but last several centuries; some being said to have produced fruit when 1000 years old. Olive crops are erratic although a full crop is expected every alternate year. Harvesting generally commences in late November or early December, lasting until Christmas or later, according to the size of the crop, the method being as follows: A cloth or matting is placed on the ground around the tree; then as many persons as the tree has branches get into it, generally by ladders, and each one taking a branch pulls the fruit-bearing twigs through their hands, careful not to break them, and letting the olives fall to the cloth or matting below. Only about 10 per cent. of the crop is crushed for oil. The remaining 90 per cent. is pickled or salted. For pickling or salting olives for every 100 pounds of fruit 100 pounds of dry salt must be added. The basket containing 56 pounds of dry salt is placed on the top of every barrel and sea water poured over the salt in the basket until filled with brine. Should sea water not be obtainable a large barrel is filled with fresh water to which dry salt is added and stirred until the brine is strong enough so that an egg will float on its surface.

Dr. J. A. Champion of Colton, Cal., has recently returned from two months hospital work in New York City. On his return home he looked in on the Republican Convention at Chicago.

Dr. S. A. Knopf, in the course of his inaugural address as a professor in the Post-graduate Medical College, New York, said:

"You will notice that I am using the word sanatorium, and I do it advisedly. I prefer this word to the word sanitarium for the following reasons: Brehmer, the founder of the first institution of that kind, called it 'Heilanstalt,' which means a healing institution; and the word 'sanatorium' from the Latin sanare, to heal, gives certainly a better equivalent to the German word than the word 'sanitarium.' This latter is derived from the Latin sanitas.

health, and is usually employed in this country to designate a place considered as especially healthy, a favorite resort for convalescent patients, or an institution for the treatment of mental or nervous diseases.

"I embrace this opportunity to call your attention to the fact that the word tubercular is equally inappropriate and will not be used in any of our lectures and discussions relative to tuberculosis. The word tubercular is almost as inaccurate as the word sanitarium when dealing with the subject of tubercu-Tubercular really means emminence or an elevation, like a pin head, and may be applied to any disease where the pathological changes are productive of little nodules, tubercular in form. The word tubercular is applied to indicate such a pathological appearance, and, as you know, there are tubercular leprosy, a tubercular type of syphilis, and various other cutaneous diseases which are sometimes described as tubercular, indicating the nodular form. When we speak of tuberculosis, the disease due to the specific organism discovered by Robert Koch, known as the tubercle bacillus, the adjective should be tuberculous."

CORRESPONDENCE

CRITICISM OF STATE BOARD.

420 EAST VALERIO STREET, Santa Barbara, Cal., Aug. 26, 1908. Editor of Southern California Practitioner, Los Angeles.

DEAR DOCTOR:—I wish to protest against some features of the State Medical Examinations as held at San Francisco the first of this month. Having succeeded in passing and getting my license, I shall not be accused of "sour grapes." In the first place I wish to protest against the action of the Secretary of the Board, who refused to honor

or acknowledge my first application to take the examination, simply because I had not used the official application blank, although I sent a check for \$25 and a certificate of good moral character from the President of our County Medical Society. In the circular of requirements which the Secretary had sent me in answer to my previous inquiries nothing was said about official blanks; and Dr. Barry, our County Society's President, thought my application was all right, and saw no justification for the Secretary's refusing it. The

Secretary said in the letter in which he enclosed the official blank that it would be too late for me to send it in, as I could not get it back to him before the Committee on Credentials met at noon of the 21st of July. I received this throw-down on the morning of the 20th, but found that a letter going out on the 2:30 mail would be delivered in Frisco the next morning, and with Dr. Barry's kind help I got my application made out in due form and it got there in time. But the Secretary of the Board evidently tried to prevent my taking that examination.

The examination itself was fair enough in most of the subjects, I thought, with the exception of a few questions in Anatomy, Pathology, and Obstetrics. But two of the questions in Bacteriology, Nos. 9 and 10, which were the diagnosis of four stained specimens of bacteria, seemed to me wholly What unreasonable. bacteriologist would undertake to name a coccus or a bacillus from its morphology alone in one stained specimen when he didn't even know how it was stained, to say nothing about its cultural characteristics or pathogenic action? I know that Prof. Theobald Smith, chief of the Department of Comparative Pathology of the Harvard Medical School, under whom I had the honor of working for

a year as his assistant, would laugh at such an idea.

I also wish to protest against the great mental strain involved in undergoing four such trying examinations of two hours or more each with only short intervals for meals all in one day, beginning at 8 a.m. and working till 9 p.m. Can you reconcile such a day of thirteen hours brain work of the hardest kind with the teachings of modern hygiene? Ought not the physicians who compose our Board of Medical Examiners and examine our applicants in Hygiene to have a more practical knowledge of mental hygiene than such an arrangement shows? Or do they deliberately arrange such a mental strain to throw down any man that happens not to have great nervous endurance or to be temporarily below par in any way?

Another most regretable feature of the examinations to me was the cheating that was carried on by several men near me. There certainly need to be more monitors to prevent dishonest and unscrupulous and presumably ignorant applicants from getting an undeserved certificate.

I hope you will see fit to publish this letter. Yours truly,

WM. L. HOLT, M.D.

BOOK REVIEWS

A MANUAL OF CLINICAL DIAGNOSIS BY MICROSCOPICAL AND CHEMICAL METHODS. For Students, Hospital Physicians and Practitioners. By Charles E. Simon, M.D., Professor of Clinical Pathology in the Baltimore Medical College. Sixth edition, revised. Octavo, 682 pages, with 177 engravings and 24 colored plates. Cloth. \$4.00 net. Lea Brothers & Co., Philadelphia and New York, 1907.

Six editions of Simon's work in a short time is certainly remarkable. The reason for its sweep is found in the author's peculiar qualifications for grasping the subject from all sides, as he unites long experience as a clinician, a teacher and a specialist in laboratory work. Accordingly he is able not only to give the simplest and most certain methods, but also their applications to practice. The demand for successive editions has enabled Prof. Simon always to keep it abreast of its most active department, so that it can be confidently consulted for the latest knowledge. This new edition, for instance,

has been thoroughly revised and a new chapter has been added upon the Opsonins, a subject of recent and great importance, wherein will be found a clear explanation of the theory and the best technique. The work is amply illustrated.

BIER'S HYPEREMIC TREATMENT in Surgery, Medicine and All the Specialties: A Manual of Its Practical Application. By Willy Meyer, M.D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital; and Professor Dr. Victor Schmieden, Assistant to Professor Bier at Berlin University, Germany. Octavo of 209 pages, illustrated. Philadelphia and London, W. B. Saunders Company, 1908. Cloth, \$3.60 net.

This volume presents an epoch-making advance in drugless therapeutics. Bier's theory is "that an inflammation—from the physiologic point of view—does not in itself represent a diseased condition, but is a phenomenon indicating the body's attempt to resist a deleterious invasion.

"To increase this beneficient inflammatory hyperaemia resulting from the fight of the living body against invasion, is the aim of Bier's hyperaemic treatment.

"Hitherto it was considered the physician's first duty to fight every kind of inflammation, since inflammations were looked upon as detrimental. Bier teaches just the opposite; namely, to artificially increase the redness, swelling and heat, three of the four cardinal symptoms of acute inflammation. Hence, all means that tend to subdue an inflammation are to be discarded. . . . The practical results obtained with the hyperemic treatment have proved beyond the shadow of a doubt the absolute correctness of the theories advanced by Bier."

The advantages of the hyperemic treatment over the other methods are given in this work as follows:

- 1. Suppression of the infection.
- 2. Avoidance of suppuration in many cases.
- 3. The possibility of using small instead of large incisions in cases in

which suppuration has already set in.

- 4. Hastening the course of the pathologic process.
- · 5. Favoring absorption.
 - 6. Diminution of pain.
 - 7. Its wide field of usefulness.

The work has nearly 100 graphic illustrations. All procedures are set forth clearly so that any person who has this volume can readily practice this system in all of its details.

REFERENCE AND DOSE BOOK. By C. Henri Leonard, A.M., M.D., Emeritus Professor of Gynecology in the Detroit College of Medicine. New and enlarged edition; 40th thousand. Cloth, limp sides, round corners, thin paper, 16mo., 145 pages; price, 75 cents. The Illustrated Medical Journal Company, Publishers, Detroit, Mich.

HEALTH AND BEAUTY. By John V. Shoemaker, LL.D., M.D., Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; President of the American Therapeutic Society; Member of the American Medical Association, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc. Royal Octavo, 476 Pages. Bound in Extra Cloth, Beveled Edges, Price, \$3.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia, Pa.

This is a popular beauty book. It contains chapters on the bath, digestion and indigestion, education of the body, cultivation of the mind, disfigurement from disease, with treatment and various other pertinent topics. It also contains 53 pages of formula of cosmetic preparations.

THE BABY, ITS CARE AND DEVELOP-MENT; FOR THE USE OF MOTHERS. By Le Grand Kerr, M.D., Author of "Diagnostics of the Diseases of Children." Professor of the Diseases of Children in the Brooklyn Post-Graduate Medical School; Attending Physician to the Children's Department of the Methodist Episcopal (Seney) Hospital; Visiting Physician to the Children's Wards of the Williamsburgh Hospital, and of the Swedish Hospital in Brooklyn, N. Y., etc. Bound in flexible green cloth, stamped in gold; 21 illustrations; 12mo. of 160 pages. Price, \$1.00 net. Brooklyn, N. Y. Albert T. Huntington, 1908.

This attractive book is full of good things. Physicians, recommend it to your patients. It will help you, help them, and save the babies.

PAIN; ITS CAUSATION AND DIAGNOSTIC SIGNIFICANCE IN INTERNAL DISEASES. By Dr. Rudolph Schmidt, Assistant in the Clinic of Drs. Hofrat & Von Neusser, Vienna. Translated and edited by Karl M. Vogel, M.D., Instructor in Pathology, College of Physicians and Surgeons, Columbia University; Clinical Pathologist and Assistant Attending Physician, St. Luke's Hospital; and Hans Zinsser, A.M., M.D., Instructor in Bacteriology, College of Physicians and Surgeons, Columbia University, and Assistant Pathologist, St. Luke's Hospital. Philadelphia and London. J. B. Lippincott Company, 1908. Cloth, \$3.00.

A realization of a great deficiency in the ability to make use of the information conveyed in the manifestations of pain was a chief reason for the preparation of this volume. Pain is often present at the very inception of a malady and this work will lend important aid to the practitioner in interpreting its meaning. The chapter on Headache is particularly interesting.

ADENOMYOMA OF THE UTERUS. By Thomas S. Cullen, M.B., Associate Professor of Gynecology, in Johns Hopkins University. Large octavo of 270 pages, with illustrations by Hermann Becker and August Horn. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

This very beautiful octavo volume of 275 pages is printed in duo-tone ink on heavy paper and superbly illustrated by Hermann Becker and August Horn.

Those who have kept abreast of gynecologic pathology in the last decade know of Dr. Cullen's large clinical experience and extensive original work that peculiarly fit him to present us with the work under review. 1894 Cullen has carefully inspected all the vast material at his command for adenomyoma and has been rewarded by finding over ninety adenomata of various kinds in the uterus, that is adenomyoma in which the uterus retains a relatively normal contour, subperitoneal and intralegamentary adenomyomata, submucous and cervical adenomyomata. The condition of the tubes and ovaries when adenomyoma of the uterus exists has also been described.

Since 1896 when von Recklinghausen published his observations on adenomyoma a great deal of argument, back and forth, has been going on as to the origin of the gland elements in the adenomyomata.

Cullen, after immense labor, has clearly shown in every case of adenomyoma the mucous membrane origin of the glands. His studies have further led him to conclude that diffuse adenomyoma has a fairly definite clinical history peculiar to itself. He thinks that in the majority of cases it can be diagnosed with a relative degree of certainty.

All morbid processes should of course be studied carefully both from their histological and from their clinical aspects. For all who do surgical work a thorough familiarity with the histological appearances of the pathological processes is absolutely essential.

The author feels that any one who reads the chapter on symptoms will agree with him that diffuse adenomyomata has a fairly definite clinical history of its own and that in the majority of cases it can be recognized with a fair degree of certainty. However, we must confess that after a very careful reading of this and the subsequent chapter, differential diagnosis in cases of adenomyoma of the uterus, we do not feel any great amount of confidence in our ability always to diagnose correctly this condition, and many of us are still in the class who think that the condition is without a very definite and peculiar train of symptoms. Certainly we have not found the symptoms so characteristic "that the hospital assistant frequently comes and says that a given case has all the signs of an adenomyoma and that he feels sure that it is the cause of the bleeding." Of the eleven other conditions with which it may be confounded there is little difficulty in diagnosis, in our experience, except in three—uterine myomata, early carcinoma and chorio-epithelioma. Possibly a high uterine polyp and a sarcoma may also cause us to hesitate in the diagnosis. Cullen himself has this "The differential diagnosis to say: between a uterus containing simple discrete myomata and one the seat of diffuse adenomyoma is often difficult, if one of the simple myomata be submucous. The difficulty is increased by the fact that there is marked tendency for discrete myomata to be associated with a diffuse adenomyoma." "Chorioepithelioma is infinitely rarer than adenomyoma, and follows an intrauterine or an extrauterine nancy-usually a hydatid mole." The author seems to have overlooked the report of Schlangenhofer of Vienna who in 1902 records a chorioepithelioma in a young virgin of 13 years who had never menstruated. Ahlfeld records one at 17 years (Monatscher. f, Geb. u, Gyn. 1895, I); Champneys (Lond. Pract., Jan., 1896) one at 18 years, and Brock (Stone, Am. Jour. Obst., Oct., 1907) a girl of 121/2 years of age.

The factors upon which Cullen bases his diagnosis are these: Ist. The bleeding is usually confined to the period. 2nd. There is usually much pain, referred to the uterus, at the period. 3rd. There is usually no intermenstrual discharge of any kind. 4th. The uterine mucosa is perfectly normal and may be rather thick. The cause of adenomyoma is still unsolved.

The book is a magnificent demonstration of the printer's art, the illustrations are very beautiful indeed, and it compensates one fully for the task of reviewing it.

The literature of American medicine is the richer for this work, and the record of American medical achievement is advanced by its production.

WILLIAM A. EDWARDS.

MEDICAL GYNECOLOGY. By S. Wyllis Bandler, M.D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Octavo of 675 pages, with 135 original illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5.00 net; Half Morocco, \$6.50 net. For sale by Fowler Brothers, 543 South Broadway.

This work by Bandler has a very decided place in the literature of the day.

Surgery in gynecologic cases is without question very popular among the majority of men who do surgical work of any kind. In the work under consideration, "operative procedures have been viewed as a last resort in those numerous conditions where medical means can accomplish so much." There are many cases where conservative treatment must necessarily be considered, and this work is intended to qualify the reader to properly care for such cases. There can be no doubt that in many cases the ultimate end of conservative treatment will prove quite as beneficial to the patient as would a surgical operation.

The author makes the following statement in the preface, which is quite true: "The life and make-up of woman are such that, aside from the diseases and injuries to which she is liable, physiologic processes, heredity, predisposition, mental perturbation, the emotions, marital relations, etc., have an important bearing, and, therefore, the physician who enters into a study of these factors becomes a far better judge of the meaning of symptoms."

On page 19 occurs a statement which would seem to be needless, and yet which admonition we find in every day's practice to be necessarily impressed upon the mind of both physicians and surgeons. "Preliminary to the abdominal and pelvic examination, the condition of the lungs, heart and the state of the blood should be determined." It not infrequently occurs that the want of this preliminary examination serves to lead the medical man to unjust conclusions regarding the true nature of the case.

On page 42, and continuing to page 47, under "Bacteriologic Methods" is given a brief and concise summing up of some of the more important bacteriologic examinations connected with this subject.

Two or three pages are devoted to Atmocausis, mentioning the works of Pincus and Balluk.

In the reviewer's opinion the book is of real value in the hands of men, where surgical procedures are next to impossible, and would doubtless be of great value to the large class of surgeons who operate for everything that comes to them in gynecology, provided they would give the book the consideration to which it is entitled.

STATE BOARD QUESTIONS AND AN-SWERS. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic; 631 pages. Published by W. B. Saunders Co., 1908.

Dr. Goepp has selected several thousand questions asked by the examining medical boards of different States.

Typical questions have been chosen and have been arranged in a logical and convenient manner.

The answers to the various questions propounded are concise and, generally speaking, accurate. In this part of the work the author has been associated with able specialists. Occasional errors in the answers have crept in, such as "urobilin is a normal urinary pigment," page 117, and again sometimes the answers are so brief that a wrong conception may be had such as the omission of "free ammonia" in a discussion of the forms of ammonia found in the urine, page 120.

However, these little defects do not detract from the real value of this volume. It would not be inaccurate to say that this compilation of questions and answers should be of much help to anyone planning to prepare for a State medical examination and the reviewers feel that for the purpose Dr. Goepp's book can be recommended.

E. L. L. L. B. S.

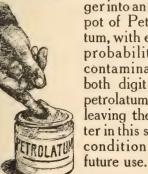
MISCELLANEOUS

THROUGH PHYSIOLOGY TO PATHOLOGY IN COMPLICA-TIONS OF GALL-BLAD-DER DISEASE.

G. E. Dickinson, of Jersey City, discusses complications of gall-bladder disease. A nervous condition resembling shock may follow severe pain, characterized by high tension, cold extremities and pallid, moist skin, and may end in heart complications. The parotid may be affected, while acute dilatation of the stomach or intestines may result. Defective elimination of bile may cause constipation, and intestinal gases, with putrefaction of intestinal contents, and

ascent of bacteria, while ulceration of the walls may come from injury of the intestinal epithelia and capillary endothelia. In cystic duct obstruction we have pancreatitis. Obstruction of bile, if intermittent, gives interstitial hyperplasia, hypertrophic cirrhosis, and contraction. When permanent we get degeneration and large, thick gall-bladders. Inflammation may extend to surrounding structures, producing traction by adhesions. Pressure of calculi may cause ulceration or necrosis of the walls of the gall-bladder and peritonitis. Impacted calculi may end in adenocarcinoma.

subrication for Digital Examination is a case of



ger into an open pot of Petrolatum, with every probability of contaminating both digit and petrolatum and leaving the latter in this septic condition for

he Old Way-thrusting the fin- The New Way-lubricating the finger with



"K-Y" applied directly thereto from the tube thus avoiding contamination of any kind, either of the patient, or of the contents of the tube.

Which of the two procedures do YOU consider the safer for the patient?

799 Lubricating Jelly is non-greasy, water-soluble, antiseptic and contains NO formaldehyde. It is offered only in collapsible tubes. Sample upon request.

W YORK, U.S.A. 07 Madison Ave.

VAN HORN & SAWTELL

and

LONDON, ENGLAND 31-32-33 High Holborn

ASEXUALIZATION IN INDIANA.

The following became a law in Indiana in 1907:

PREAMBLE.

"WHEREAS, Heredity plays a most important part in the transmission of crime, idiocy and imbecility.

"Therefore, be is enacted by the General Assembly of the State of Indiana, that on and after the passage of this act it shall be compulsory for each and every institution in the State entrusted with the care of confirmed criminals. idiots, rapists and imbeciles to appoint upon its staff, in addition to the regular institutional physician, two skilled surgeons of recognized ability, whose duty it shall be, in conjunction with the chief physician of such institution, to examine the mental and physical condi-

tion of such inmates as are recommended by the institutional physician and board of managers. If in the judgment of such committee of experts and the board of managers procreation is inadvisable, and there is no probability of improvement of the condition of such inmate, it shall be lawful to perform such operation for the prevention of procreation as shall be deemed safest and most effective."

The act went into effect March 7, 1907, and by the end of that year there had been 296 vasectomies in the State Reformatory.

The Antikamnia Chemical Company are erecting a factory for their product in St. Louis. The building will cost nearly \$100,000.

THERAPEUTICAL HINTS

The most satisfactory method of lubricating the urethra is by introducing "K-Y" Lubricating Jelly directly into the canal. This operation may be effected by means of a small, hollow, burnished metal cone, easily sterilized in boiling water and provided with a thread that permits its being screwed on to the "K-Y" tube. In this way, the parts, as well as the instrument, are lubricated. Cone is furnished upon receipt of 25 cents and, in addition, a sample tube of "K-Y" free. "K-Y" is thin enough to permit of easy and perfect distribution over any and all the surfaces-whether of the urethra, fingers, catheters, sounds, specula or other instruments-to which it may be applied and it doesn't soil the clothing.-Van Horn & Sawtell, 20 East 42d St., New York City.

There is no doubt as to the efficacy of Arhovin in gonorrhea and gleet. Send postal to Schering & Glatz, 58 Maiden Lane, New York City, for Arhovin literature.

Dr. J. W. Churchman, in the Johns Hopkins Hospital Reports, Vol. 13, page 189, reaches the following conclusions from a series of bacteriological experiments with the urines of patients who took urotropin, methylene blue or salol by mouth:

"I. Administration of urotropin, methylene blue or salol renders the urine inhibitive of the growth of the staphylococcus pyogenes, streptococcus pyogenes, B. typhosus, B. coli communis and B. proteus vulgaris.

"2. Urotropin and methylene blue are more markedly efficacious (inhibitive) than salol; the choice lies with the first.

"3. These drugs effect inhibition of bacterial development rather than destruction of bacterial life. They render urine an uncongenial medium for growth, but not an environment necessitating death.

"4. Their effect is weakest on the staphylococcus pyogenes and strongest on the B. typhosus and streptococcus pyogenes."

In the treatment of recurrent dysmenorrhea, the most gratifying results are obtained by beginning the administration of Ergoapiol (Smith) three or four days in advance of the catamenia and continuing its employment until menstruation has ceased.

- Despite the fact that Ergoapiol (Smith) exerts a pronounced analgesic and sedative effect upon the entire reproductive system, its use is not attended with the objectionable by-effects associated with anodyne or narcotic drugs.

The unvariable certainty, agreeableness and singular promptness with which Ergoapiol (Smith) relieves the several varieties of dysmenorrhea has earned for it the unqualified indorsement of those members of the profession who have subjected it to exacting clinical tests.

The Diagnostic Importance of the Indican Test.—The profession is, each day, becoming more fully awake to the diagnostic and etiologic importance of Indicanuria. The presence of any considerable proportion of Indican (indoxyl-potassium sulphate) in the urine is definitely indicative of the undue putrefaction of proteid material in the intestinal canal and the constitutional absorption of the toxic products of such putrefaction. As a guide to the physician in the making of this simple but important test, there is nothing more helpful than the Indican Color Scale,

issued by F. H. Strong Company, makers of Chologestin, which is accompanied with a full interpretation of the several color reactions and a description of what is considered, by many authorities, as the most approved test. A request to the above named firm, 58 Warren Street, New York, will bring one of the Color Scales referred to, together with samples of Chologestin for trial in the treatment of patients requiring combined cholagogue, digestive and antiseptic medication.

RATIONAL TREATMENT OF INFANTILE DIARRHOEA.—The main point is to modify the diet, suppressing objectionable food, particularly milk not properly modified in strength and sterilized. Meanwhile the bowels should be kept in a thoroughly aseptic condition. An experience of ten years or more has demonstrated that this is better accomplished through the use of Tyree's Antiseptic Powder; one teaspoonful or less of this powder diluted in a pint of tepid water makes an ideal washing for the intestine as an enema. Sample with chemical and bacteriological analysis sent upon request to J. S. Tyree, Chemist, Washington, D. C.

Under the name of Diamond Antiseptics Eli Lilly and Company have on the market a line of bichloride tablets of such distinctive character that it



would seem impossible to mistake them even in the dark. The bottles are conspicuously

labeled, of peculiar diamond shape with corrugated corners, immediately apparent to the touch. The individual tablets are diamond shape and the larger tablets are marked poison in plain black letters so that their toxic character is readily apparent even when removed from the package. Samples may be had from the manufacturers on request.

In an article on Dysmenorrhoea, Solomon Henry Secoy, M.D., of Jeffersonville, Ind., says: "The treatment of dysmenorrhoea very naturally comprises such remedies and procedures as will correct the cause, and the administration of anodynes to relieve the pain. In the neuralgic form we must correct the cause. If that be malaria, quinine must be given. In most cases where the neuralgic form is presented there is anemia, and no relief will be secured till this factor is overcome. Iron in some available form must, therefore, be given. During the period of menstruation the administration of antikamnia and codeine tablets in doses of two tablets every two hours, will relieve the pain. If these tablets are given at the beginning of the attack, we can often entirely prevent pain."

Local applications prove efficacious elsewhere in inflammation—why not here? Applications with hygroscopic properties reduce inflammations in other tissues of the body and will do likewise in typhoid fever. The best of these is antiphlogistine and its use in typhoid fever is demonstrable. It will tend to reduce the inflammation and thus contribute in making the typhoid patient comfortable and assist him in his return to health.

Antiphlogistine is applied over the abdomen to the thickness of an eighth of an inch and then covered with a suitable soft cloth. This is renewed twice daily.

This use of antiphlogistine is a valuable adjunct in the usual treatment of typhoid fever and is of distinct assistance.—Medical Era.

In regard to the therapeutics of Hamamelis, of which Pond's Extract is admittedly the standard preparation, no better evidence can be brought forward than the statement of prominent medical authorities. For instance, Potter, in his well-known work on "Materia Medica, Pharmacy and Therapeutics," says: "Hamamelis is used with great benefit, both externally and internally, in cases of hemorrhoids (particularly those of the bleeding variety,) varicose veins and ulcers, venous congestion and threatening local inflammation. It is highly recommended in hemorrhages from the nose, stomach, lungs, rectum and kidneys, and externally for sprains and bruises, foul ulcers, the pruritus of eczema, and catarrhal diseases generally."

Dr. S. J. Crowe, Johns Hopkins University Pharmacological Laboratory. (Johns Hopkins Hospital Bulletin, April, 1908.) From a prior considerations Crowe concluded that urotropin, introduced as a urinary antiseptic in 1894 by Nicolaier, should, when given internally, be excreted in the biliary passages and there develop an antiseptic action. He accordingly undertook animal experimentation in this direction, with the following results:

- I. Administered by mouth, the remedy is rapidly absorbed and remains in the circulating blood for 24 hours. Apparently the maximum concentration in the blood is reached 5 to 8 hours after administration.
- 2. It is excreted in the bile, pancreatic juice, and directly through the wall of the gall bladder in dogs.
- 3. It was found in the saliva and milk of dogs after intravenous injection of I gram.

After giving details of clinical operations, Crowe adds: "Urotropin has been demonstrated in the bile, cerebrospinal fluid, synovial fluid, pleural effusion and blood of man.

"When given in sufficiently large doses (75 grains per diem) it appears in the bile in quantities which suffice to exercise a decided bactericidal action.

"The remedy is probably of efficiency in:

- "I. Acute infections of the gall-bladder.
- "2. Convalescence from typhoid fever, as a prophylactic of subsequent gallstone formation and to sterilize the gall-bladder and thus prevent the patient's becoming a chronic bacillus carrier.
- "3. Before gall-bladder operations, as a prophylactic."

Kelene.—Pure Chloride of Ethyl (Fries Brothers) is being more and more recognized as a most valuable local anaesthetic. Its many advantages include being harmless, no matter how frequently used, always ready for instant use, easily applied with uniform results, convenient to carry. These are all important points for the operating surgeon. Complete anaesthesia in 30 seconds.

In studying the action of Pond's Extract, it is found to possess marked anodyne, antiphlogistic, astringent, antiseptic and styptic properties. It relieves pain, irritation and congestion by its soothing and cooling effect on the surface structures, and a coincident improvement in the local capillary circulation.

Pepto-Mangan (Gude) holds firmly its place as a standard remedy. It always makes good. Send to the M. J. Breitenbach Co., 53 Warren street, New York City, for free samples. Messrs. Breitenbach will also send you without cost a valuable Bacteriological Wall Chart

For he would rather have, at his bedhead,

A twenty books, clothed in black or red.

Of Aristotle, or his philosophy,

Than robes rich, rebeck, or psaltery.

Chaucer.



Vol. XXIII.

Los Angeles, October, 1908.

No. 10.

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Associate Editors.

SOME THOUGHTS ON THE MEDICAL PROFESSION.*

BY THE VERY REV. JOSEPH S. GLASS, C.M., D.D., LOS ANGELES, CALIFORNIA, PRESIDENT OF ST. VINCENT'S COLLEGE.

Success is the watchword of the age. It is the goal of every man's endeavor. The wage earner, the salaried clerk, the man of business, the lawyer, the teacher, the physician, and the minister, each extends a ready hand to grasp the prize. And justly. The ambition to succeed is laudable, for it is legitimate and ennobling. To this ambition we owe the wonderful advance science boasts today, to this ambition the present century must attribute its glory.

One of the surest incentives to success in a professional career is a just appreciation of the profession. Unfortunately, however, for many success has lost its meaning. It has become synonymous with wealth. An ability to gather shekels is elevated almost to the dignity of genius, while true genius, like many a flower, is born to blush unseen. The writer of the popular ballad commands the purse strings of the nation; the great masters of music lived and sang and died in poverty. The

writers of the popular ballad have tickled the fancy of the day, and, in turn, they have been declared successful. The masters of other days have delved deeply into the very soul of music-their fingers, tipped with passion's fire, have swept the heart strings of humanity; their touch, under the guidance of genius, has struck a chord which echoes every emotion in the vast scale of human feeling; and can we say they have been failures? It is unjust, then, to measure success by the standard of wealth. The very mention of wealth carries with it the suspicion of commercialism, and it is degrading a profession to lower it to the plane of business. Nothing injures a liberal profession so seriously as does commercialism, for the breath of commercialism, like a blast from the desert, withers the bud of genius and makes the flower of talent droop and die.

Wealth, however, is not the only magnet that attracts the efforts of man.

^{*}Address delivered at the inauguration of the twenty-fourth annual session of the College of Medicine, University of Southern California, on October 5, 1908.

Honor has its devotees. The idle dreamer is charmed by the glitter of honor, and he bends every effort to make that glitter all his own. His selfesteem is tickled by the plaudits of the unthinking crowd. The words of praise and commendation so readily. thoughtlessly, so insincerely dropped in his path, loom before him in an idle moment. They take on the appearance of reality and beguile him into a state of self-deception. He fancies he has the qualities attributed to him; he imagines he really has the perfection others have predicated of him. This state of mind begets self-sufficiency, and self-sufficiency spells professional ruin. The self-sufficient lawyer injures the case of his client, but he cannot escape detection. His blunders are blazoned forth and fall under the biting, scathing criticism of a merciless public. The errors of the teacher are soon noised abroad and meet with the well-deserved contempt of scholars. The heterodox views of the preacher are quickly seized by the champion of righteousness for the basis of a heresy charge, and the future of the minister is blighted. Each finds his ruin in self-sufficiency. But the mistakes of the self-sufficient physician or surgeon are too often hushed in the silence of the grave.

It is not my intention, however, to urge you with motives so unworthy to an earnest application to your honorable profession. I ask you rather to consider its dignity. 'Tis true, the honor it deserves is not always accorded to it, and often the physician is regarded as one who has merited the reproach of society. There is nothing new in this manner of dealing with the benefactors of humanity; it was ever thus in the history of mankind. We may marvel, sometimes, at the gross ingratitude of ancient Greece towards her illustrious benefactors. The story of the expa-

triation of Aristides and the record of the trial and death of Socrates form powerful chapters in the history of man's ingratitude to man. The assassination of Cæsar in Rome's capitol and the proscription of Cicero, Rome's foremost champion, prove that even the Romans, whose glorious legacy to modern civilization is their system of legal codes, were not immune from ingratitude. No ingratitude to man is so unreasonable as that to which the physician falls a victim. Byron, that deep student of human nature who played with the passions and foibles of man, has fittingly described in the words of one of his most noted characters the folly of sneering at the medical profession:

"Physicians mend or end us,

Secundum artem: but although we sneer In health—when ill, we call them to attend us,

Without the least propensity to jeer."

This witticism in Don Juan plainly indicates that, in regard to physicians, unfair methods of treatment were in vogue long ago.

These remarks, however, have another and greater value than that of their testimony to the custom of other times. They show the origin of the medical profession. The painter and the sculptor, the poet and the philosopher answered no necessary call from humanity. Apelles gave color and life to his canvas, and beauty grew under the chisel of Phidias in answer to the call of artistic Athens. Anacreon and Aeschylus and Homer produced their immortal works in answer to the cravings of the Grecian mind for the beautiful and the sublime in literature. Plato and Aristotle soared in the realm of truth at the behest of intellectual Attica. But the physician plied his art in response to the cries of stricken humanity; the medical profession traces its genesis to human misery.

The mythology of the ancients may impress the casual reader with ideas which do the ancients an injustice. The student will find in that subject much food for thought. Ancient mythology presents, not so much a series of Gods and Goddesses encumbered with more than human frailties, as an endeavor of the human mind, seeking the justification of its indulgence in passions, and the ennobling of its honest efforts. Little need we wonder, then, that every good thing in life was traced by the ancients to a mythological source. Nothing could have appealed to them as a greater exemplification of the divine than the alleviation of the sufferings of mankind. What more natural than that the inferior nature in its hour of affliction should turn to the superior? Accordingly, we find them invoking Apollo as the healer of the sick, and we find them, too, making Aesculapius, Apollo's son, the patron deity of physicians. This action of the ancients gives an idea of the dignity wherewith they clothed the medical profession, in those far-off, mist-covered days.

profession, gentlemen, Your none of its dignity in its transition from the land of fable to the realm of history. No man of his time enjoyed greater esteem than did Hippocrates, "the Father of Medicine." He lived in an age of unusual intellectual activity, an age in which there was a grand rebellion against the superstitions which had almost strangled the civilization of paganism. He joined the master minds engaged in the work of reformation, and he freed the medical profession from the fetters imposed by the credulity of a people groping in darkness. His reforms were not displeasing to the people of Athens, a fact amply attested by the veneration they entertained for him. They idolized him, and with him they traced his origin through seventeen successive generations to Aesculapius. Their action has stamped upon your profession a dignity which time has not effaced, but rather augmented.

The Divine founder of Christianity was Himself a physician, for it is related of Him that He went about restoring sight to the blind, hearing to the deaf, healing the sick, cleansing the leper. In the early days of the Christian Church we often find the priest a physician—the physician a priest; and though during the first decade of centuries of the Christian era we do not find wonderful progress made in the study of medicine, yet at all times, we find the physician honored and respected, and his profession exalted as among the highest. During these ages it is the influence of the Arabians that is brought to bear upon medical science, and nearly the entire advance of science during those hundreds of years must be ascribed to these wanderers of the desert.

But in the brilliant intellectual outburst of the thirteenth century, when the sparks of learning, so carefully and so faithfully preserved in the monasteries, burst into luminous flames, science of every kind progressed as it never had before. The contributions of the thirteenth century to theology are conceded; its work in philosophy, though disparaged, still serves as the basis and the acme of reasoning. The contributions of this century, however, to the science of medicine and kindred subjects are sometimes sadly ignored or viciously misrepresented. The patronage of the Church in that wonderful century was not limited to the ecclesiastical sciences. One of the characters most noted and most honored

was a physician and an ecclesiastic, Albert, whom posterity has surnamed "The Great." With his illustrious pupil, the sainted Thomas of Aquin, and with his famous English contemporary, the Franciscan friar, Roger Bacon, he occupied the highest place in the study and teaching of chemistry during that eventful period. Then there was Vesalius, the father of modern anatomy; Guy de Chauliac, the father of modern surgery; Caesalpinus, the probable discoverer of the circulation of the blood; Malpighi, the father of comparative anatomy; Lancisi, a founder in clinical medicine. We believe it to be a matter of fact, that there is no list of physicians connected by any common bond in history who are so gloriously representative of scientific progress in medicine as the Papal physicians of the 13th Century. The faculty of no medical school presents such a list of great names as those of the men who were chosen to be the official medical attendants of the Popes. The list of the royal physicians of any reigning house of Europe for the last seven centuries, looks trivial beside the roll of Papal physicians. We may recall the fact here, that the physician, Peter of Spain, one of the most distinguished natural scientists of the 13th Century, afterwards became Pope John XXI. We may, likewise, recall another interesting fact of this century—the establishment by Innocent III. of the first city hospital, as we have it at the present time—that is, a public institution meant for the reception of those suffering from accidents, from acute diseases of various kinds, and for the providing of shelter for those who became ill AND HAD NO FRIENDS to take care of them.

These brief historical notes plainly indicate the progress of medicine, and that its professors were esteemed, during the so-called "Dark Ages." It is not hard to discover the cause of the honor and esteem which are accorded to the physician. This cause is rooted in the very nature of his work. The physician aims at human perfection. and "human perfection is health of body and soul." A popular cry at the present day is "mens sana in corpore sano." It indicates the necessity of a healthy body as the foundation of a soul, strong both morally and intellectually. The double nature of man requires a threefold perfection. It calls for perfection in the body, in the intellect, and in the will. To this work, human nature summons the three great benefactors of humanity—the physician, the teacher, and the priest-the three characters so beautifully united in the person of the Divine Founder of Christianity.

The physician, the teacher, and the priest—their object is to further the interests of humanity. No individual can afford to dispense with the services of any one of these three. Though the development of man's higher nature is entrusted to the priest and the teacher, still these are hampered in their work unless aided by the physician, for a strange law of proportion exists between the body and the soul. The moral and intellectual faculties are brighter, nobler, and purer, in proportion as the physical nature is more perfect. History offers to our consideration a few exceptions, but these exceptions derive their interest and their prominence from the fact that they are contrary to the general rule. The physician's work, then, is far more important than it appears at first glance. Directly, it affects the physical nature; indirectly, but powerfully, the higher nature.

The profession, gentlemen, which you have chosen, is one of dignity and sanctity, noble in its purpose and neces-

sary in its nature, and, one of gravest responsibility. The physician, like the rest of mortals, is amenable to the law. The fact that the law of the land grants him privileges, which it denies to his fellows in other walks of life, does not eliminate responsibility. Even a hasty glance will reveal the truth that right and wrong are not constituted by the declarations of the civil law. Even the thoughts and wishes of man cannot make moral rectitude or moral turpitude. Such things are dependent on a Higher Power. There are questions of right and wrong utterly ignored by the human law. Man judges man on the evidence of the senses. He takes no cognizance of internal acts. Courts of justice go even further. They ignore offences and serious crimes which supposedly do not affect another party, but this policy does not justify the evildoer. He is still subject to the Higher Power. The vexing social question is an apt illustration of this point. The civil law may attempt to limit the evil to certain districts, it may endeavor to clear the locality of the one party, but it takes no measure to punish those who indulge because they have indulged. The crime, therefore, is not a right action, because the civil law has ignored it; but the action is wrong, because the Supreme Lawgiver, God, to Whom each man is accountable for his every action, has declared that the nature of the action is evil.

In no other human profession is the question of personal responsibility so important as is that of the physician. His actions have to do with the greatest and most sacred gift of the Creator in the natural order, and the Giver of Life will hold him responsible for the results of his actions. The physician, like every rational man, must recognize the truth of the principle that he who voluntarily places the cause is responsi-

ble for the effect. The physician, too, like every rational man, knows the utter fallacy of the principle that the end justifies the means, yet no one is more frequently called upon to act on it. These two facts present to every prospective physician two important considerations. In the first place, the physician is bound to make himself the master of the greatest possible knowledge in his profession. The day of his graduation is not the day to say farewell to study-that day comes not until he bids adieu to the world. A life of earnest application and devotion to duty is the life of the worthy physician. him, the love of ease and comfort can have no part. His task is sacred, and the cry of suffering humanity is the call he must obey, even at the cost of personal sacrifice. His life is one of such self-denial that it requires a nature cast in the hero's mould. Well may the school of medicine engrave in fiery characters over its portals:

No servile spirit need enter here!

By no means second to the unconquerable devotion to duty which characterizes the worthy physician, is the necessity of personal integrity. Very few men have need of moral courage so great. In the course of his practice he will be called upon to perform actions ignored by the law of man, but forbidden by the law of God-by human nature itself! It is a crucial moment, this, and it takes A MAN to say fearlessly and resolutely the word of refusal. He must stand the taunts, the gibes, and the sneers of men whose consciences are not so correct, whose moral sense is so low that they will stoop to do a wrong.

Here it is that the physician true to his noble profession will not only adhere to the principles of right in his own acts, but he will become a light of instruction to the ignorant, and a teacher of right to the malicious and a source of strength to the weak. Oh! what a power for good may not the physician be, in the community in which he lives!

In these days, when men are attracted by fads and new doctrines (whether they concern the body or the soul, whether they attract many or few), society looks to the professional man—to the physician—the lawyer—to the clergy—for protection and safety.

Young men—beginning or continuing the study of medicine—yours is a mission of truth and right and mercy. Set out upon your course with the highest and best ideals—love and follow right principles—and success, in the true sense of that word, will crown your life, and humanity will rise up and call you blessed. The physicians of history and the physicians of today are among the greatest benefactors of suffering humanity. It is a noble line—from Hippocrates to the physician of today—and the ambition you have to take your

place in that line is worthy of your best efforts.

You will be thrown into the midst of temptations of every kind, but the noblest qualities of your manhood must make you rise superior to them. The simple and the innocent, the ignorant and the poor, will place all the confidence of their beautiful natures in you, and you have it in your power to wrong them or to prove yourselves worthy of that confidence. Unless you are men of lofty ideals, exact knowledge and splendid integrity-unless the elements are so mixed in you that nature may stand up and say to all the world "this is a man"-you will prove untrue to your trust. Be men who so combine skill and honesty that to you may be applied the words of the poet:

"His skill was almost as great as his honesty;

Had it stretched so far, 'twould have made nature immortal,

And Death should have played, for lack of work."

INTRODUCTORY REMARKS—INAUGURATION OF THE 24TH ANNUAL SESSION OF THE COLLEGE OF MEDICINE, U. S. C.*

BY GRANVILLE MACGOWAN, M.D., LOS ANGELES, CAL., ACTING DEAN AND PROFESSOR OF
GENITO-URINARY DISEASES, COLLEGE OF MEDICINE OF THE UNIVERSITY
OF SOUTHERN CALIFORNIA.

Fellow Students:

Through the absence of the official head of our College, Dr. Jarvis Barlow, it has become my duty and incidentally a pleasure to preside at the opening exercises of this, the 24th year of our activity as an institution for the teaching of medicine.

The guidance and control of the novice should be a pleasure to his older brother.

To teach, and in teaching to continuously put forth effort upon effort to increase ones own knowledge of the subject to be taught, and demonstrate ones fitness to show the path of success to others; to perceive and anticipate the possibilities of development in the forming mind; with care to guide and direct the thoughts and actions of those whose mental powers are great; to spur the indolent to full exertion, curb the ambition of those who would overtask themselves, and encourage the dull, is a game well worth the playing.

Intimate association with the young,

^{*}Remarks made at the opening of the College of Medicine of the University of Southern California, on October 5, 1908.

in confidence and trust, is the real fountain of youth for the aged.

The only reward which my associates and myself have, or expect to receive, for the thought and time and money expended in helping you to your profession, is that which may come from the respect and courtesy shown us by your using your full strength of mind and body to so prepare yourselves that after your investment with the cap and gown of the doctorate, it may be truthfully spoken of you "He is duly and well prepared."

Great sacrifices have been made by many of the Faculty for the establishment and maintenance of this school. Its welfare touches us deeply. There is no money profit to the most of us from your tuition fees. Very meagre salaries only are paid to those who devote the greater part of their time to the branches which they teach, and are thereby deprived of an opportunity for gain in the practice of our profession. There is always a surplus of expenditure. The College has no endowments. The income is never sufficient to pay the expense of running the plant required for your instruction. The sick relieved in the dispensary and the student in the class room are both the direct beneficiaries of the voluntary contributions of the members of the College Faculty, which makes it possible to keep the doors of the institution open.

It is our School. Not something which brings us money, but something which we, in a measure, pay the bills of and help support. Hence we feel keenly the odium cast upon us when any of our graduates are rejected by examining boards as unprepared to practice medicine.

In past years efforts have been made, sometimes with greater or less success, to have us lower the standard of qualifications and requirements for promotion or graduation. Whenever we have done so we have had reason to regret it.

The end of your goal is the legal right to earn your living as a practitioner of medicine; and in these United States, something more is necessary to accomplish this than having in your possession a diploma from some recognized school of medicine. The obtaining of a diploma from somewhere is not a very difficult matter, but year by year it is becoming harder to make that diploma good by satisfying the legal requirements of State Boards.

When you enroll yourselves as students in any educational institution you subscribe to all the rules and regulations. There is no question of sentiment to be considered. The standard is set for us by the Association of American Medical Colleges. We must abide by the rules of the Association to which we have subscribed or guit. You must abide by them or quit. Men who want to be promoted must conform to these requirements both in attendance upon lectures and in the passing of examinations. And men who want to graduate, must have demonstrated, each for himself during the four years of studentship, their fitness to do so. We will aid you in every way both as individuals and as a Faculty. If you do not understand a subject do not keep your ignorance to yourself, speak up and ask for help. If you do not get it in the place you ask for it, go to the Educational Committee with your troubles and you will be looked after.

We are all human, and no man is at all times just to everyone. If one of you, or all of you, thinks at any time that any one of your teachers is unfair in his treatment of you, do not make a scene like a twelve-year-old boy, or go on a strike like a lot of Union laborers, but go yourselves as individuals, or let your class officers go to the Dean and the Chairman of the Educa-

tional Committee, and specifically, clearly, patiently and intelligently lay your grievance before them. If it be well founded you will get justice; if it be illy founded you will also get justice.

I am sure that no person is always well behaved. A wise father does not see all the faults of his children. Little human digressions are not difficult to forgive or pass by. But in a considerable body of young men there is sometimes a lad who is dishonest in his dealings with his mates and with his teachers; and envy, malice and vicious habits from time to time breed trouble-makers.

It is very hard and difficult for governing bodies to efficiently police students. Each man owes it to his class that he shall be clean and straight as a class member; and each class owes it to the Faculty that no individual in it

shall be allowed by his classmates to jeopardize the good repute of the class as a student body.

We do not want you to ever be like the soldiers at Brownsville. Elect as class officers thoughtful and conservative men whom you can trust, and through these officers curb all reckless behavior of individuals, suppress all destruction of property and compel restitution or amend for acts implying lack When the offender or of honor. offenders prove obstreperous or defiant. or the act is a criminal one, let the Class as a body instruct its accredited officers to be the accuser before the Dean and the Executive Committee of the College Faculty. In this way, I think, but little occasion for severe discipline or lack of harmony can arise between the governing body and the student body.

THE OLD-TIME DOCTOR.*

BY E. B. KETCHERSIDE, M.D., YUMA, ARIZONA.

I was requested, at the meeting last year, to write a paper on the old time doctor and, while I feel that I am not able to do the subject justice, I will do the best I can.

Many think that because the old time doctors did not do as we do they were ignorant and unlearned, but in this they are mistaken. They were as strong mentally and as well educated as the doctors of today. Why then did they not treat diseases and practice surgery as we do? Because the science of medicine was not so far advanced at that time as now. They were building the foundation upon which we stand.

The practice of medicine dates back as far as the aches and pains of man, but at first and for hundreds of years it was very simple and mixed with superstition. Its progress was necessarily very slow as it was handed down by tradition only, until Hippocrates, about 430 B. C., began the study of medicine and surgery scientifically, and to write books and teach others. He was as far in advance of the past ages as we are in advance of his time, and deserves as much credit as any man of today. Since Hippocrates' time many able men have devoted their lives to the study and development of the science and have gradually evolved the great system of medicine which we have today.

This we could never have had but for the old time doctors. I wish I had time to name the many great and good men who have taken part in this great work, and the ability to recount the heroic battles they fought, not only against disease, but against the superstition and ignorance of their day.

In 1737 Franklin made his discoveries

^{*}Read before the Arizona Medical Association, April 28, 1908.

in electricity and, though he put it to little use himself, he laid the foundation Morse, Edison, Marconi and others have worked upon in making discoveries and inventions which have revolutionized the world; and Franklin therefore deserves as much credit as any who have followed after. So it is with the old time doctor: He laid the foundation for the great discoverers and inventors in medicine and surgery, and he should have his share of the credit and honor.

The typical old time doctor was big hearted, kind, unselfish and noble, and worked more for the good of humanity than for money. He went day or night, pay or no pay, and it was never too dark, wet or cold for him to respond to his calls. He was more ethical and honored his profession more than we do today; therefore was held in higher esteem by the people.

His fees were ridiculously small as compared with the fees of today, and if his patrons did not have the money to pay, as was too often the case, they paid him with a horse, cow, calf, pig or even chickens; or with forage for his horse or edibles for his own table.

He did not have the elegant pharmaceutical preparations and fine instruments to work with that we have now. He had very few instruments and they were crude: for medicines he had roots and herbs such as Peruvian bark, ipecac, mandrake, jalap, rhubarb, aloes, and opium, and Dovers powders, and always calomel, which last he gave in ten, twenty and thirty grain doses. The fly blister, thumb lancet and tooth pullers were his constant companions, and were carried in his pill bags. Equipped thus he went forth to battle with disease. He bled, puked, purged and blistered in nearly all cases. He gave his bitter decoction in alopathic doses.

Many diseases common with us were unknown to him. Appendicitis was unheard of by him. The horrid bugs we talk of so much were unknown to him. Conscious of having done all that he could do, he slept soundly not aware that the bugs were devouring his patients. It was a blessing that he did not know, for he knew nothing of germicides, antiseptics, disinfectants or asepsis.

When called to see a child with indigestion or some other disturbance in the alimentary canal, he would say it had worms, give it some vermifuge followed by a cathartic. Next day when he called he asked if it passed any worms, and if answered in the negative he would say it had, but that the medicine cut them up and they could not see them. When a child was suffering from bowel trouble, so common during the first and second summers of its life, he said it was teething. If the child died it could not be helped as he could not stop it from cutting teeth, therefore he was not to blame.

Sometimes their mistakes were better than their judgment. I remember well the story one old physician, eminent in his day, used to tell. He was called to see a negro slave on a plantation (negroes were worth more then than now, and their masters were very prompt in having them treated when sick), made his diagnosis and gave him some pills. When he stopped to see his next patient he was horrified to discover that he had given him the wrong pills. There was nothing he could do but await results, as it was a long way back to the plantation and there were no telephones in those days. He fully expected to see some one pass the next morning with a corn stalk measure. (On the plantations in the South it was the custom to measure a dead person with a cornstalk, cutting it to the right length. They would then carry the measure to the cemetery to lay the grave out by.) Instead he saw a negro coming from the same plantation riding a mule at top speed. He

stopped at the gate and called to the doctor, "Massa wants some more of them pills. That nigger is well, but another has the same trouble and he wants the same kind of pills for him."

The abortionist—one of the greatest curses society has to contend with—is a product of our advanced civilization.

He was unknown to them, and had he existed would have had but little to do.

The old time doctor has fought a good fight and has gone to his final reward, and to rest from his labors. We should honor his memory for having gone before, blazing the way for us.

OSTEITIS DEFORMANS (PAGET)—REPORT OF A CASE.*

BY DR. HENRY HERBERT, PROFESSOR OF PHYSICAL DIAGNOSIS, COLLEGE OF PHYSICIANS AND SURGEONS, LOS ANGELES, CALIFORNIA.

Before describing the case, I wish to give a brief sketch of the history and nature of this rather rare disease.

It was Sir James Paget who in 1876 described the first five cases in London; in 1900 he published already a series of twenty-three cases. In 1886 Virchow and V. Recklinghausen described a case, the latter investigator making a study of the histology of this disease.

Up to 1902 there were only 7 cases on record but in 1903 there had been 17 cases reported in North America. Osler in 1905 stated that he had seen 4 cases; but there were only 67 cases on record in 1907.

The nature and symptoms of Osteitis Deformans are best explained by abstracting from Sir James Paget's words (Wm. T. Watson, John Hopkins Hospital Bullet. June, 1898) "The disease begins in middle age, is very slow in progress; the mind remains unaffected. The disease affects most frequently the long bones of the lower extremities and the skull and is symmetrical.

"The bones enlarge, soften, yield, become unnaturally curved and misshapen.

"It is preponderating among males, appears between 40 and 50; is in some relation to cancer and sarcoma; of 8 cases traced to death, 5 died with cancer or sarcoma. Out of his 23 cases, 4

became blind. The disease is not inherited.

"The bones most affected are: The tibia, femur, radius, ulna, clavicles, spine and vault of skull; it never attacks bones of the face, hands or feet (herein lies its contrast with acromegoly).

"Pathology: The bones appear to be very vascular. The compact substance is increased in every part. The entire bone is altered into a hard, porous substance.

"The number of Haversian systems and canals are diminished; the canals are enormously widened, filled with various cells, fat and a layer of osteoblasts on the inner walls of some of the canals.

Its nature is probably inflammatory; its etiology is unknown. It is seen more often in England.

It has to be differentiated from hyperostosis or leontiasis cranii, rickets, osteomalacia and acromegoly. Wm. T. Watson reports one case of 25 years standing with all the characteristic symptoms (in a man 62 years of age) with a loss in height of 9¼ inches.

According to Morton Prince, Boston (American Journal of Medical Science, November, 1907) the following pathological conditions exist in the bones:

(1) Absorption of bone. (2) New

^{*}Case demonstrated at the Los Angeles County Medical Society, June 26, 1908.

formation of bone tissue without calcification. (3) New formation of bone tissue with calcification. Any of these processes may predominate.

The history of the patient whom I now present is as follows: Mr. A. R. R., 43 years of age, was born in Connecticut. He is one of six children, of whom four are living. Parents are of English descent. His father died 57 years of age from asthma and heart trouble; his mother is 67 years old and living. Since 18 years, he has been a steam fitter and is shipping clerk for the last two years. There is no history of any disease up to 1900, when the first symptoms of his present ailment began to appear. He had a tired and painful sensation in his legs from knees down to the ankles; it came in paroxysms lasting several days. Gradually it became steady and the tibia was very painful on touch; the thigh began to bend until he became bow-legged, the hips grew wider and his size diminished gradually by three to four inches. As the disease progressed, he suffered intense pain, especially in standing or walking. He noticed also a gradual increase of the circumference of his head; his former head gear was No. 61/8; he

now wears hats No. 7½. His gait became peculiar, rather wabbling, and he felt tiresome after more or less exertion in walking or working. He was the unfortunate object of various therapeutic experiments, especially of antisyphlitic treatment, but without benefit.

Patient is married, had two children, one of them died of spinal-meningitis. There is no history of syphilis or alcoholism; he uses tobacco and has lived a quiet, uneventful life.

Four years ago he had "Tic douloureux" on the right side for six months; his teeth began to decay since. His appetite is and always was good; his bowels were regular. Since 1900 he had suffered from night-sweats. These stopped two years ago, when he came to California. There was no disturbance in sexual sphere or in function of bladder; he used to experience palpitation of the heart; his muscular sense and strength were not impaired. His limbs always felt tired, aching, also at night, and swelled up to the knees. His original weight was 150 pounds. He now weighs 128 pounds. He used to suffer from headaches in orbital region on right side, rarely now.

LIGHT.*

BY P. H. SUNDE, M.D., LOS ANGELES.

Before passing to the different usages of light in medicine a few fundamental principles of the physical properties of light would, I believe, be well worth reviewing.

Light travels at the rate of 300,000 kilos per second. It contains various rays, composed of waves of different lengths and rate of movement and differentiated from one another as regards their quality and quantity.

When ordinary sunlight is made to

pass through the spectrum, it is split up into these various rays which for convenience may be divided into the visible—red, orange, yellow, green, blue, violet and the invisible—infra-red and ultra violet, these being on the outer sides or beyond their respective rays. These spectred rays may be further divided into heat rays, luminous rays and chemical or actinic rays. To the heat rays belong the infra-red and red, to the luminous, yellow and orange, and

^{*}Read before the Los Angeles Medical Symposium Society, February 12, 1908.

LIGHT.

to the rest of the spectrum belong the actinic or chemical rays. This division is somewhat arbitrary, as no one ray contains purely actinic properties or vice versa. It has for example been proven that the red and mira-red do contain some actinic properties and that the violet is not entirely devoid of heat rays. It is therefore impossible to state the exact action of the various rays. The following rules are about as complete as any:

is: It may be stated that in general the action of the white light is both chemical and oxidizing, the latter being the weaker.

2nd. Violet and ultra-violet rays act very much the same as does the white light, but with much greater actinic activity.

3rd Green light has but a very feelle action but the little action observed is similar to the violet.

4th. Red and yellow rays are at first sight apparently without any chemical autum but in reality they have an effect the reverse of the violet.

5th Infra-red and red light have almost only an oxidizing effect. They have the least chemical action of any.

orh. The heat rays have a much greater penetrating power than the chemical cases.

An illustration of the relative properties of the various rays is the experiment of Bie, who found that the so-called non-chemical rays (red, orange, yellow and green) did inhibit the level pment of the bacillus prodigiosus of liture media, by exposing the culture to these rays for six minutes while the same action was accomplished in one-fourth minute by the whole spectrum.

PHY-INDOSE AND BACTERIOLOGIC ACTION OF LIGHT.

The action of light on living organisms was first discussed by Lavoisier at about the end of the 18th century. Wm. Edwards in 1824 made some lengthy investigations on lower forms of animal life. He observed that frog's spawn if left in the dark would perish, while in light it hatched. Richard found that flies' eggs hatch more quickly if exposed to blue or violet light than when exposed to white, red, vellow or other rays. Guaruioni also hinted that the ultra-violet light had a more favorable effect upon the growth of the silk worm than other light. On the other hand the effect of light upon bacteria is practically the reverse, that light which normally stimulates tissue cell growth, diminishes or inhibites bacterial growth. Duclaux, Downs and Blount and Bie and many others have shown that sunlight and especially the ultra-violet, violet and the blue rays are strongly bactericidal.

It would be impossible for me in this short paper to go into details or even mention all the experiments made in this direction. Mentioning a few such as the following will demonstrate something of the work performed in the last few years. Perhaps the best known is the effect of the sunlight on the bacillus of the t. b. killing them in from 5 to 10 minutes. Bang found that ordinary white light from 30 amp. arc light at a distance of 3 m.m. killed the surface layer of t. b. in 6 minutes. Dieuboune found that bacteria were killed in onehalf hour when exposed to direct sunlight, in 6 hours when exposed to diffused daylight, in 8 hours by the exposure to the rays from an arc light of 900 c. p., and II hours when exposed to the rays from the electric incandescent light.

Dr. Soiland demonstrated that direct sunlight to the throat through the open mouth lessened by half the ordinary infective period of diphtheria in his own case. This has since been corroborated by other observers. Others have demonstrated that concentrated LIGHT. 463

sunlight checks germ growth in fourfifths minute, and kills them in 15 to 20 minutes. While the rays from arc light from metal electrodes kills germs in from 5 to 10 seconds.

One notices, in reviewing the experiments, many discrepancies in the report of the different men as regards the time necessary to obtain various results, but this can be easily explained when we take into consideration the various kinds of apparatus used, the various degrees of concentration of the light and the various distances between the substances exposed and the apparatus. Another fact to be mentioned is the penetrating power of the various rays, which in short may be said to be in an inverse proportions to their bactericidal power. Thus the violet rays which are strongly bactericidal are the least penetrating while the red rays are the most. One peculiar fact is that the painting, on the surface exposed, of some red substance such as 5 per cent. eosin solution not only caused the rays to be more penetrating but seems to add to their beneficial effects. Thus Tappeiner and Jesionek used this as a paint and also as a subcutaneous injection in the treatment of superficial epitheliomas, lupus and tubercular ulcers and claim their results to be excellent. The addition of erythrosin to media makes bacteria much more sensitive to the yellow and green light.

The power of the skin to prevent the penetration into the deeper structures of the bactericial rays was cleverly demonstrated by Jansen who found that a piece of skin inserted between the light source and the bacteria did not prevent their death when the thickness was only 1.2 m.m., but it did prevent it if the thickness was 1.5 m.m.

Klingmiller and Hallersstadler claim that the Finsen light does not kill bacteria in deep tissue. They exposed pieces of lupus to the Finsen light for 10 minutes and then inoculated them into the peritoneal cavity of guinea pigs with the result that tuberculosis developed.

This difficulty of penetrating tissues is well worthy of note. Glass prevents the penetration of or rather absorbs the ultra-violet rays. I might at this point mention a peculiar idea brought out as regards the susceptibility of the negro to the t. b. by Dr. Conrad of Oklahoma. He refers to the skin pigment as being a good absorbent of the actinic rays and ask the pertinent question as to whether the black skin of the negro by preventing sunlight from penetrating into the deeper tissues and thus preventing them from destroying the small tubercular foci at their incipiency was not responsible for their high mortality from this disease instead of any racial susceptibility. He states as a fact that all those who in the postmortem room showed signs of previous tubercular infection which had perperfectly healed were blonds, and from this draws the conclusion that whenever a negro or one having a dark skin became infected he was inclined to succumb, due to the fact that the light was prevented from penetrating to the infected focus.

THERAPY.

With all the theories and all the experiments that have been performed naturally comes the question. therapeutic value have these rays? When one reviews the different citations from the various men of their wonderful cures one must either believe that light is the cure of all ills or that some physicians allow their enthusiasm to run away with their common sense. One writer for instance cites a number of cases of locomotor ataxia that he has greatly benefited by exposing them to the action of strong incandescent light baths, and there are numerous reports almost as wonderful.

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Out of the conglomerated mass, however, some truths shine out so clear and strong as to place light amongst the things that have a large therapeutic value and it is these truths that I wish to bring out before closing.

Among the earliest investigations along this line were those of Dr. Finsen on the effect of red light in penetrating the severe suppuration and its consequent pitting in smallpox. This is so well known among you that it is not necessary for me to do more than mention it.

Next in order comes the treatment of lopus by Dr. Finsen, who used an apparatus of his own design. At first the sun's rays were used but later an arc light was substituted as it was found to be more rich in violet and ultra-violet rays and is of course more constantly available. The apparatus is substantially a large arc lamp of from 60 to 80 amps, and having about 35,000 candle power with water cooling device. On account of its large size and its expense and the relative rarity of lupus in this country, the Finsen lamp is seldom used. In its stead smaller lamps have been devised such as the Finsen Reyn lamp which is no doubt the best (next to the original). The London lamp, the Lortel-Genaud lamp, and the Ultra (an arc lamp having iron electrodes), all of which are arc lamps, rich in ultra-violet and violet rays. To prevent the absorbtion of these rays by glass, quartz lenses are used. Their greatest field of usefulness is in lupus, vulgaris, and lupus erythematosus, but other skin diseases such as eczema, aloperia, areata, acne, etc., have also been successfully treated. In Germany the Uvial lamp is much used. This lamp is a modification of the Cooper-Hewitt lamp, which is a mercury vapor lamp very rich in chemical rays (ultra-violet, violet and blue) but in which these rays are absorbed by the glass of the tube. To eliminate this defect Scott made the glass of what he called a Barium phosphate chrome glass which is pervious to the chemical rays and called it the Uvial lamp. With this lamp Axman treated 13 cases of chronic ulcer of the leg, acute and weeping eczemas, tenia vesicular, acne and alopecis areata; all with excellent results.

Kromayer of Berlin has had remarkable success with an arc light with metal electrodes without pressure lens. A current of from 15 to 25 amperes is employed and the parts were exposed from one-half to one minute at a distance of from 4 to 10 c.m. He claims 28 successes out of 35 severe cases of aloperia areata, practically a success in all mild cases.

Edward C. Titus found by experiments that the detrimental effect of X-ray on cocoon eggs, etc., was to a great extent neutralized by subsequent exposures to the rays of an ordinary marine searchlight, and has since used this light upon patients whom he was treating with X-ray with the idea of preventing burns, he used the light twice as long as the time of exposure to X-ray and believes he has been able by this method to practically eliminate X-ray burns.

Now a few words about the incandescent light, light baths, etc. The incandescent light is not rich in chemical rays and some of what they do contain must of necessity be absorbed by the glass. Much of the benefit obtained by these light baths must be contributed to the sweating, the following rub, and to the phychological effect of the bath and not to any special action of the light. But the subject is not settled and more investigation along this line is certainly indicated. One is certainly struck with the variety of diseases treated and the success claimed by the different authors.

H. Finkelpearl for instance claims good results in syphilis. He treated

32 cases with both the arc and the incandescent light baths using them alternately and reports successful results. He, however, used also other specific remedies.

One author claims good results in Arterio-sclerosis by the use of the electric light bath

The white light has been used with very good success in rheumatic and neuralgic pains as has also the light baths and the red light.

Personally I have, through my association with Dr. Soiland, seen excellent results, in both superficial and deep seated rheumatic and neuralgic pains, by the use of powerful incandescent and arc lamps.

Summarizing the subject 1 wish to say:

Ist. That the chemical rays (ultraviolet, violet and blue) have a distinct value in skin affectations.

2nd. That Finsen and Finsen Reyn lamps give the best results in lupus, vulgaria, lupus erythematosus, and epithelioma.

3rd. That other lamps being rich in chemical rays have a similar but weaker effect.

4th. That the Uvial and the lamp of Kromager have given many satisfactory results in such skin diseases as alopecia areata, eczemas, chronic ulcers of the legs, etc.

5th. That the value of the incandescent light has not been determined and more investigations along this line is indicated.

O. T. Johnson Bldg.

VITAL STATISTICS — THEIR IMPORTANCE AND THE MEANS OF SECURING THEM.

BY E. S. GODFREY, JR., M.D., BISBEE, ARIZONA.

Before discussing the means to be employed in the collection of vital statistics, it would be well if we first considered in what ways they are useful. Many intelligent people are inclined to look upon them as of merely academic interest—things for sociologists, genealogists, historical and literary grubs to dig and delve into, now and then bringing up some curious fact for 'the world to look at and wonder. That they mean more than this, and that they have a real, live and present value, few people seem to realize.

We will first consider the registration of births, and see how they can be of use to the people living today, as well as to those of the next and all future generations.

First, in the matter of descent. A properly registered certificate of birth constitutes evidence almost incontro-

vertible. It is a prima facie proof of the claimant's descent, and may be of value to him or to other persons in matters pertaining to the relations of guardians and wards; in the administration of estates; in the settlement of insurance; in the granting of pensions, and in the requirements of foreign countries in reference to marriage and legacies. By showing the date of birth it becomes of importance to the country at large as well as to the person registered and to his or her parents. The disability of minors is a case in point. In marriage and voting something more than the applicant's statement or even his oath, as at present administered, should be required, and if registration were universal, this requirement would not work any great hardship to anvone.

In the enforcement of laws relating

to education and child labor, the greatest difficulty encountered is in disproving the stated age of the child. Parents will cheerfully lie about these things if it is money in their pockets to do so. Again, we find birth registration of importance with regard to the criminal code; as for example in determining the age of consent, the irresponsibility of children under a certain age for crime and misdemeanor. As Dr. John S. Fulton in a paper read before the American Public Health Association says:

"The private interest of the citizen in the registration of births is indeed superior to his interest in the registration of deaths, for a greater proportion of his privileges and immunities, rights and duties, turning upon the question of his age, and his parentage, are definitely conserved by the registration of his birth."

It is surprising the number of copies of these records wanted by interested parties. The New York City office had more than 3000 calls for copies, or the information contained in them, during the year 1902, and it is hardly to be doubted that the number of requests would be greater if the people were assured that the information existed.

Now as to the matter of registering deaths. Every physician who has stopped to think of the matter at all, must nave realized their importance to public health. For all the jocundity and sarcasm of which they have been the butt, statistics yet remain the most reliable source of information in public matters of any nature. If it is known that the death rate is high, interest in the prevention of disease will be stimulated as it can be in no other way. If, as at present in Arizona, we have nothing more than guesses to go by, we cannot expect to arouse public interest

in these things; and public interest we must have if we are to have public health administration worthy of the name. In the first place, because it is the public or their representatives that disburse the funds that are necessary. They must see the necessity for the initial expense, and they must see the results and some benefit if funds for maintenance are to be had. Again, unless the people as a whole are interested, they will not take the trouble to find out how to prevent the spread of communicable diseases. We know that personal hygiene has much to do with the prevention of such a disease as typhoid fever; that vaccination will prevent smallpox, and that proper screening will prevent malaria and yellow fever. Let the people find out that a large proportion of their fellow citizens are dving of any of these diseases and they will heed the advice which is at all times theirs for the asking.

To the intelligent and efficient administration of public health, these statistics are of prime importance. They enable the officer in charge to understand his field and to apply remedies where they are needed. Unless he has them he is groping in the dark. Effective police bureaus know the haunts of vice and crime, and effective health bureaus must know the haunts of disease. Dr. Allen of the Pennsylvania State Board of Health says:

"Incomplete, unrelated vital statist cs never accompany method in administration. System in classification of experience is the mark of the officer who acts according to law rather than impulse. Because our local and state boards of health are without such classified data for the respective administrative areas, their sanitary science has degenerated into mere sporadic nuisance abatement, a kind of blind man's buff."

Now, before taking up the subject of how to obtain complete and reliable vital statistics, we can learn a great deal as to how not to go about it by looking at the experience of Pennsylvania. As early as 1852 Pennsylvania had a law placed on her statute books that was a great deal better than the present law of this Territory, and one that to the casual observer would seem to be all that the heart could desire. It provided that:

The register of wills in each county should keep the records of births, marriages and deaths in that county.

That each physician should at once make a record of each birth and each death that occurred in his or her practice in a book provided for that purpose; that this book should be returned to the register, duly signed, every thirty days; that testamentary letters should not be issued until the death of the testator had been certified, and that guardians should not be appointed for minors until their births had been duly registered; that registers and copies thereof should constitute prima facie evidence in all courts of the State: that registers should register certificates promptly, and that making a false entry or a false certificate should be punished by a severe fine and a term of imprisonment not to exceed seven years.

Excellent forms of birth and death certificates were provided. The former required:

- I. Full name of child.
- 2. Sex.
- 3. Color.
- 4. Full name of father.
- 5. Occupation of father.
- 6. Names of other issue living.
- 7. Maiden name of mother.
- 8. Hour, day of week, of month, and the year of birth.
- 9. Place (town or township and county) in which born.

- 10. Name of physician or other person signing the certificate, or on whose application the entry was made.
 - 11. Residence of such person.
 - 12. Date of certificate.
 - 13. Date of registration.
- 14. Signature of the registrar or of his deputy.
 - 15. Any additional circumstances.

The death certificate required:

- I. Full name of deceased.
- 2. Color.
- 3. Sex.
- 4. Age.
- 5. Name of father of deceased.
- 6. Name of mother of deceased.
- 7. Occupation.
- 8. Place of birth.
- 9. Name of wife of deceased.
- 10. Name of husband of deceased.
- II. Names of issue living.
- 12. Date of birth and date of death.
- 13. Cause of death.
- 14. Name of place, town or township, and county in which person died.
- 15. Name and location of burial ground in which interred.
- 16. Name of person returning certificate.
 - 17. Residence of such person.
 - 18. Date of certificate.
 - 19. Date of registration.
- 20. Signature of the registrar or his deputy.

Now these requirements would seem to be ample. And yet they failed, and failed flatly from the very first. The registrar of Mifflin county, which had a population in 1850 of nearly 15,000, gives his report for 1854 as follows:

Marriages			 	 		 11	one
Births							
Deaths		 					25

The following letter accompanied the report:

Lewiston, Jan. 19. A. D. 1855. Dear Sir:—

Agreeably with a clause of the 13th

section of the Act of the Assembly for the registration of births, marriages and deaths, etc., I herewith transmit an abstract of the number that have been returned and registered in this county during the year 1854. I suppose from the above that you will conclude that we people of Mifflin county neither "marry nor are given in marriage," and consequently are not doing our part toward "multiplying and replenishing the earth;" and also that our locality is an exceedingly healthy one. The fact is, the registration law, so far as this county is concerned, is a complete failure, there being but one physician in the county who pays any attention to it, except in cases where a certificate is necessary in order to make valid letters of administration, etc.

Respectfully yours,

JAMES McDowell, Registrar in and for Mifflin County.

Now, why did this apparently excellent law fail? Whether or not any earnest attempts were made to enforce it or not I am unable to say, but if there were, they were foredoomed to failure, for the law was lacking in two absolutely essential requirements, and it is because these omissions were and are essential that I wish to impress them upon you so that you will bear them in mind. In the first place, it required the returns be made to county officials, a system that has proven a failure from the Atlantic to the Pacific, wherever it has been tried. In the second place, it did not require burial or removal permits before interment.

Let us see why the county system has proven a failure. First, the issuing of burial permits by a county officer causes great inconvenience both to the undertaker and to the family of the deceased, owing to the necessary delay, if they happen to live in another town. Second, the county officer cannot know

of the funerals taking place in other towns than his own. He would be the only one to know whether or not the death had been reported and the burial certificate issued. Third, State supervision will result in greater uniformity.

The burial permit is not only an essential to securing complete mortality returns but more than this, it would seem to be no less indispensable to the prevention of the burial of those who have died under suspicious circumstances. Governor Hastings brought this matter to the attention of the Pennsylvania legislature in his message of 1897, by saying:

"The deeds of the murderer, the abortionist, or the suicide can be easily concealed from human view until decomposition has obliterated all evidence of the crime. To obliterate these dangers effectually, it seems to be necessary to require the issuing of a burial permit by some constituted authority, and to make this issue contingent upon the presentation of satisfactory information respecting the cause of death."

To those of you who have lived and practiced in registration states or cities. I think that the lack of any such provision in our own laws must more than once have excited wonder in the early days of your practice here. It is useless and unreasonable to expect physicians to make returns of all births and deaths occurring in their practice, unless there be some means of checking them up and calling them to account for neglect.

Pennsylvania, Ohio, Michigan, Iowa and many other states have tried to collect vital statistics by having the census enumerator or tax collector obtain the necessary information annually or semi-annually as a sort of side issue to their other duties. But these schemes have failed universally. The division of vital statistics of the Bureau of the Census

has made an exhaustive study of methods and has found that without exception, every method based on anything other than burial permits for the dead has been utterly useless.

The reason for the non-registration of births lay primarily with the county system, and secondarily with the unreliable mortality returns, which serve to check the birth registration. I shall return to this later.

Let us now turn to the consideration of laws that have proven effective. The U. S. Census Bureau has published a pamphlet containing the essential requirements of registration as approved by the American Public Health Association, the conference of State and Provincial Board of Health of North America, and the American Medical Association. These essential requirements are, for the registration of deaths, eight in number. They are:

- I. The immediate registration of deaths; that is before interment, removal or other disposal of the body.
- 2. The certificate of death, which will be taken up more fully later on.
- 3. Burial or removal permits, without which no body may be buried, removed, or otherwise disposed of. They should be based on a satisfactory certificate of death and should be signed by the registrar.
- 4. Fixing the responsibility of the registration. This should be fixed by law and the best results are obtained where the duty is imposed on the undertaker. In fact I cannot think of anyone else on whom the responsibility should be fixed.
- 5. The preservation of the records and a complete alphabetical index thereof should be provided for.
- 6. Penalties should be provided for the violation of any of the provisions of the law. Each section should specify the punishment for the infraction

of its provision, and the penalties should be based on their importance.

- 7. There should be an efficient local registrar in each city or town or other local political district. He should be required to enforce the law in his district under penalty for neglect. He should also be required to make returns to the central registration office, and the time and manner of making such returns should be expressly designated by law.
- 8. The central registration office should have direct supervision and control of all matters relating to local registration. It should be empowered to remove inefficient or negligent local registrars, to appoint others in their stead, to prescribe, print, and distribute the forms of certificate, to receive the returns and to preserve the records in suitable order for convenient reference. The rules and regulations made by the central office should be given the force and effect of law.

The registration of births pre-supposes an effective registration of deaths, for the latter probably serves as the most effective check on the former. A large number of children die in their first year, as we all know, and if the death of a child is reported the fact of the non-registration of its birth can be easily ascertained. The requirements of an effective law are:

- I. Immediate registration of the birth; that is, not longer than three days should be allowed. Granting a longer time than this is simply giving those on whom the responsibility rests a longer time to forget.
- 2. The certificate of birth, which will be considered with the death certificate later.
- 3. Supplementary report in the event that the child was unnamed at the time of filing the birth certificate.
 - 4. Fixing the responsibility of mak-

ing the returns. This also should be fixed by law, and should properly devolve upon the attending physician or midwife. In the event that there was neither of these, the father or some relative should be held responsible.

- 5. Provisions should be made for the preservation of the records and their indexing, as under deaths.
- 6. Penalties should be provided, as under deaths.

Now then, the standard certificates of births and deaths come up for our consideration. These have been prepared by the Census Bureau in conjunction with the Committee on Demography of the American Public Health Association. The certificate of death is 7 1-3 by 8½ inches and has, as you see, a margin reserved for binding. It requires:

THE PLACE OF DEATH. City, street number and ward. If the death occurs away from the usual place of residence, certain facts are called for to be given under "special information." If the death occurred in a hospital or other institution, its name is to be given instead of the street and number.

THE FULL NAME OF DECEASED. This is necessary for identification.

PERSONAL AND STATISTICAL PARTICU-LARS. These are needed in the classification of deaths according to population. The population is classified under certain headings which you will easily recognized, and it is very important that the deaths should be classified in the same way. These particulars are: Sex, color or race, date of birth, age (in years, months and days), conjugal condition (single, married, widowed or divorced). It is very important to state this exactly, as sometimes a widowed or divorced person is classified as single and at other times as married.

BIRTH PLACE. If in the United States

the State or Territory, if foreign the name of the country.

NAME OF FATHER AND HIS BIRTH PLACE.

MAIDEN NAME OF MOTHER AND HER BIRTH PLACE. The names of the parents are necessary for the identification of the diseased, and their birthplaces are useful not only for this purpose but also to show the influence of race characteristics on the mortality. The mother's birthplace is largely used for this purpose as best showing this influence.

Occupation. The value of this is apparent, but should be confined to those who have pursued some gainful occupation. Married women and children living at home, should be reported as having "none," and care should be exercised in order to prevent the confounding of totally different occupations; e. g., engineers should be reported as locomotive engineers, stationary engineers, civil engineers, etc.

These particulars may be given by any competent person, a place for whose signature and address are provided just below. The medical certificate of death is to be made out and signed by the attending physician. It requires the date of death, certificate of attendance and of death, the cause, primary and contributary.

Under the Special Information mentioned above for hospitals, transients, etc., there is required the former or usual residence, length of time at place of death, and where, in the opinion of the attending physician, the disease causing death was contracted, if not at the place of death.

Below this is a space for noting the place of burial or removal, date of burial, name of the undertaker and his address.

To the left is the space for the regis-

trar to record the time of filing the certificate and to sign his name.

While we are on this matter it may be excusable in me if I say a few words concerning the assigning of the cause of death. The cause of death should be stated plainly and in terms that will not be misunderstood. In the Manual of the Classification of the Causes of Death published by the Census Bureau, there are some of the most amusing things assigned as the cause of death, among which are the following: Bed-ridden, bold hives, congestive chill, fever, bed fever, colliquitive fever, hot fever, ladies' fever, lingering fever, gastric involvement, internal gathering, humor in the head, infectious disease, overwork, and visitation of God.

Among those more or less commonly reported by physicians and which are indefinite are the following:

Abscess, without qualification as to cause or location.

Accident, without giving the nature of the accident or the injuries causing death.

Bed sores.—The disease that compelled the patient to keep his bed should be given as the primary cause of death. The bed sores are to be given as the secondary cause.

Cancer.—The part involved should be stated.

Debility.—The cause of the debility should be stated.

Heart failure.—This is an absolutely useless term, and one frequently used for heart disease.

This list could be greatly extended. Symptoms as the cause of death enter not a few times. It is also well to mention at this time that complications or sequelæ should not be assigned as the primary cause of death. A death resulting from nephritis following scarlet

fever should be assigned primarily to scarlet fever.

THE CERTIFICATE OF BIRTH. This is a little smaller than the certificate of death, and is thus easily distinguished from it—a matter of some convenience where both are registered in the same office. It provides for:

THE PLACE OF BIRTH.

THE FULL NAME OF THE CHILD. If the child has not yet been named at the time of making the report this space is left blank, and the deficiency is supplied by making a supplementary report.

SEX. TWIN, TRIPLET. OR OTHER PLURAL BIRTH, and in this event its NUMBER, in the order of birth.

LEGITIMATE OR NOT. DATE OF BIRTH. FULL NAME, RESIDENCE, COLOR, AND AGE AT LAST BIRTHDAY OF FATHER. ALSO HIS BIRTH PLACE AND OCCUPATION.

MAIDEN NAME OF MOTHER AND THE INFORMATION ASKED FOR CONCERNING FATHER.

Number of This Child of This Mother. This regardless of the fact that some of her children may be by a previous husband. Number of Children by This Mother Now Living.

CERTIFICATE OF ATTENDING PHYSICIAN OR MIDWIFE. When there was no physician or midwife in attendance this is to be filled out by the father or other person acquainted with the facts.

The supplemental report contains the principal facts as to the child's parentage and the other necessary data to established its identity, filled out by the registrar from the original certificate. The name is given in the space provided for it by the physician or midwife, or better, I believe, by the father or mother of the child.

Our present birth certificates, by not making any provision for the subsequent reporting of the child's name nor containing a space for giving its number in the order of births for that mother, lose much of their value as a means of identification. In the event that a child dies before it has been named, this fact is stated in both the birth certificate and the death certificate. The surname only is used, and "died unnamed" is inserted in lieu of the given name. In still births both the death and birth certificates so state.

In conclusion, gentlemen, I must acknowledge my indebtedness to the publications of the U. S. Census Bureau and especially to a paper by Dr. Cressy L. Wilbur contained therein: If there are any of you who feel interested in this matter, you will find all this and a

great deal more, and much better told, in the circulars issued by the division of vital statistics. They are free for the asking. My principal object in this paper has been to awaken an interest in the matter and secure reliable registration for our cities in the NEAR future, and for the Territory of Arizona at the next session of the legislature. I believe it the duty of every member of this society to work toward that end. Registration that does not include every birth and every death is all but useless. We don't want halftruths. We want the whole of it, and the only way to get it is by going after it and keeping after it until success attends our efforts.

TREATMENT OF GONORRHOEA IN FEMALES.

BY ALFRED J. DOWNS, M.D., LOS ANGELES, CALIFORNIA.

The treatment of gonorrhoea is usually unsatisfactory, and if not seen early, the uterus and its appendages are almost certain to become involved. In acute cases rest in bed is essential, and on account of the pain in many cases is becomes compulsory. A month spent in bed at the onset of the attack will not be too long, and it would help immeasurably to shorten the attack and prevent complications.

Very large douches of pot. permang, solution should be given twice daily; three to five gallons of hot water should be used. Insist on the recumbent posture and that the water be very hot, with the douche can just high enough so the water will run slowly. To accomplish this in the best manner an ordinary kerosene can with the rubber tubing attached to the faucet can be used. The precautions ordinarily given to the male patient should be given to the female. She should be instructed as to the danger of carrying the infection by the fingers to the eyes or to the

rectum, and also as to the likelihood of children contracting the disease from sheets, towels, slop jars or bedroom chambers, or, if she takes enemas, she should be warned of the danger of carrying the infection by means of the enemata tip, to the rectum. Of course, no other member of the family should use her douche tip, but if she be not cautioned some innocent party is likely to suffer. If there be any vesical or urinary symptoms the balsams may be given throughout the attack, or alkalies may be administered, such as pot. citrate. The diet should be restricted; no highly seasoned foods or liquors can be allowed. She must abstain from Clean sexual intercourse. cloths, or better still, sterile pads, must be worn, renewed as soon as soiled, and the soiled ones burned. By this precaution the involvement of the glands of Bartholin will be prevented. Abscess of the glands usually comes on during the last weeks of the attack and is the result of allowing the discharge to remain over the mouths of the ducts until it becomes ground into the glands. When abscess does occur, it should be opened, thoroughly drained, and its cavity cauterized with carbolic acid.

Local treatments, two or three times weekly, or every day, if the patient can come to your office, should be given. The patient is placed on her back, and a folded sheet is put under her buttocks to prevent stains from getting on her clothing. The external genitals should be cleansed with warm water or boric solution, paying particular attention to the mouth of the urethra. Saturate a piece of cotton in 4 per cent, solution cocaine and press against the urethra. Now take a small hand syringe, the kind used in giving injections to men, fill the vagina with some antiseptic solutionas argyrol 20 per cent., or peroxide 50 per cent. If the syringe be inserted deeply into the vagina and the solution thrown in slowly, quite a large quantity will remain in the vagina, providing the perineal muscles are intact. The solution is allowed to remain in contact with the vaginal walls and cervix while you are proceeding with the treatment of the urethra. If the urethra is not sufficiently cocainized by the small pledget of cotton which you have placed there, twist some cotton on an applicator, saturate with cocaine solution and insert gently into the urethra. You may then insert a female urethral speculum and cocainize deeper, if necessary. All parts of the canal are now touched with silver nitrate solution, from 3 to 30 per cent. As you remove the speculum observe Skene's glands. If the mouths seem diseased, probe them to the bottom with silver nitrate solution. One of my cases which had extensive hemorrhages from the neck of the bladder, yielded quickly to one application of silver nitrate.

Now, to resume the treatment of the vagina: With the fingers of one hand push the labia apart and catch the escaping solution with absorbent cotton. Insert the vaginal speculum and swab out the canal of all discharge and solution. With cotton twisted on an applicator go over the cervix externally and internally as far as the internal os with to per cent. silver nitrate. If the infection has penetrated deeper great care must be taken with antisepsis, as making applications to the interior of the uterus is fraught with danger. Next, go over the vaginal walls, ending by inspecting the glands of Bartholin and making applications to their ducts, if necessary. If the infection has extended beyond the uterus into the tubes and ovaries, rest in bed, very large hot douches (as described above), heat to the lower portion of the abdomen, morphia to relieve the pain, and saline cathartics given frequently to relieve the pelvic congestion, will help to keep the infection within the pelvis. An operation may be necessary to relieve the condition, if, after the subsidence of the acute attack, pain continues or abscess forms. But this does not fall under the treatment of gonorrhoea.

303 O. T. Johnson Bldg.

COMPLICATIONS OF RUBEOLA, RUBELLA AND SCARLET FEVER.

BY EARL SWEET, M.D., LOS ANGELES, CAL.

In looking over the literature upon the diagnosis, treatment of complications and treatment of scarlet fever, one is struck by the fact that most of the work is done with the idea of preventing the complications, and but comparatively little that is new has been done in treatment of complications after they arrive.

It would be interesting to know how many and what serious complications there were in the thirty cases of scarlet fever, and broncho pneumonias in the seventeen cases of measles in this city in January, just past.

Measles has only three or four serious complications, more common, I am sure, from apparent neglect of parents and sometimes physicians, than from his inability to diagnose early and treat same. These complications are broncho pneumonia, otitis media and bronchitis, and possible eye symptoms. Given a case with sudden rise in temperature (not always seen however) either in the desquamative stage, or eruptive of 102° to 103°, slight cyanosis and rapid pulse. troublesome cough generally, and it is safe to search for lung involvement. All authorities agree that it is most always in lower lobe and posterior where this will be found, and it is the duty of the physician to repeatedly examine the chest in these cases.

When convalescence is delayed and the temperature fails to go to normal, pneumonic processes should be looked for; and should the fever continue and the symptoms of chronic bronchitis persist, as they often do, for weeks, tubercular conditions should be strongly suspected. The more often searched for, the more often they will be found.

Holt, in Archives of Pediaratics, September 1907, gives a method for finding the bacilli, which he was able to do in 95% in a reported series of sixty-two cases.

TREATMENT: It is very important to keep away from depressants, as coal tar products, and even phenacetine, has caused death in these cases. Aconite and veratrum viridi should be let alone. H. C. Wood, Jr., found the action of veratum very unstable and to his observation not to be trusted. Digitalis, camphor and small doses of strychnine, when needed, give better results. When temperature is high, cool packs or sponges will allay nervous irritation and reduce fever. These are

used all the way from 60° Fahrenheit to 105°. They are useless unless applied by skilled hands and should not produce shock.

Diet in these cases is of extreme importance; milk, in some form, is probably the best, according to age and condition of child. Brandy should be used when needed as stimulant to tide the patient over and support the heart. Generally speaking, expectorants are useless, except in older children and should be used sparingly then.

In broncho pneumonias prolonged into weeks, always be on the lookout for a pleural effusion—often pus. Laryngeal symptom, so called croup, demand steam vapor tent apparatus.

OTITIS MEDIA: Sudden increase in a decreasing temperature, vague pains, restlessness, always examine the ear. In fact, this ought to be a routine in all cases of measles, even light attacks. In epidemics, aural involvement ranges from 5% to a very high 20% in hospital practice.

Nasal douching done gently and with not too much force, using hot saline solution as hot as can comfortably be borne, will save many of these cases from possible deafness. Paracentisis, where there is a bulging membrane, will effect a cure in these cases and avoid further complications. In all cases, if not sure, have the courage to call a competent specialist and let him decide on best mode of treatment and share responsibility. All minor complications should receive treatment as they arise.

German measles when it can be diagnosed as epidemic has been known to cause death. The only complication observed is a general enlargement of all lymphatic glands, seen by Koplick and others in Germany.

SCARLET FEVER: Scarlet fever is the most dangerous and causes more deaths than any of exanthemata, minus their complications, No mild case is with-

out the possibility of aural or renal involvement. From 10% to 15% of deaf mutism can be charged to this disease alone. Mixed infection with diphtheria demands The antitoxin. toilet of the nasal passages demands the same as for measles only more persistent, and in older children, oftener with heat applied internally to the neck and ear. Otitis generally begins in the desquamative stage, often when children are up and about. Sharp rise in temperature, pain, restless sleep, facial twitching, should lead at once to examination of the ear.

Endocarditis is generally of a mild type and the subjective symptoms almost entirely wanting. In the second week, a systolic murmur can be heard at apex, and later a mild degree of hypertrophy observed, which disappears so far as we can determine later.

It must be borne in mind that depending on the type of infection and of the severity of a given case, endocarditis is septic and the patient generally dies. Repeated examinations of the heart and rest for the patient are to be insisted upon, often far into convalescence.

Joint complications are a synovitis with serious infusion, or a true strep-lococic infection; if so, often result in pus. Where you have more than one joint infected and pus formation, the case is generally septic and death ensues.

Lymph nodes are best left alone in early stage, unless distinct fluctuation is present. Early incision has been found to cause the pus to gain entrance to blood stream—the last state being worse than the first.

NEPHRITIS: In from 10% to 20% of cases, a true nephritis begins before the end of the third week after there are no subjective symptoms; the temperature goes to 104°, is more or less stationary. Objective symptoms

slight oedema about lower eyelid, albumen and red blood corpuscles in kidney excretion. The mere presence of albumen is not indicative of true nephritis. It is, however, an indication for extreme caution and treatment directed to kidney function.

Prognosis: The lower falls the excretion of urine, the more fatal the prognosis. Uremia supervenes when total amount is about 150 cc.'s for the twenty-four hours, by actual measurement. Baumler, of Freiburg, Germany, who has had large experience in private practice, institutes active treatment when the kidneys fail to excrete more than 450 cc.s actual measurement in twenty-four hours. He avoids even mild diuretics, as he believes they irritate. He uses one to two leeches, applied to the kidney region. He has found that one leech withdraws about 10 cc.'s of blood in about one hour. No diet but milk is allowed, if the patient can get the required amount of nutrition from same. Warm baths at 95° to 100° and allowed to remain in onehalf hour, if no shock. If this fails and total excretion of urine sinks to 150 to 200 cc.'s, he favors venesection and takes from 100 to 150 grams of blood. In a reported series of many cases in private practice, he declares he has seen this procedure save life many times. Milder cases, unless too young, if kidney symptoms are severe at outset, should receive continuous saline solution per rectum by drop method. If infants, two high rectal irrigations saline solutions in twenty-four hours-patient in proper position, and retained, if possible. The position of patient and method is the measure of success in this. Moderate doses of digitalis may be beneficial at this time.

The Hospital for Contagious Diseases, in New York, reports a less per cent. of kidney complications than any other similar institution. This they at-

tribute to the giving of large amounts of water—not followed, however, to the point of disturbing the stomach functions.

In a study of four hundred and fifty consecutive cases in the Grove Hospital, London, five of the fifty-threcases of nephritis began before the twenty-fifth day. Many other complications arise in this disease and are to be treated a conditions indicate from time to time. Those mentioned are the more serious and most often fatal; therefore, should receive major attention in scarlet fever

References: Holt's Archives Pediatrics. Baumler Modern Medicine. Koplik. Dublin Medical Journal. Reports Hospital Contagious Diseases, New York.

THE NEW DISEASES.

It's funny how these doctor men
Discover so unceasing
Diseases new to kill men off,
The frightful list increasing;
Bad lingering colds we used to have,
They call them now bronchitis;
The old-time sore throats of our youth
Are changed to tonsilitis.

The leg-aches that we used to have,
By clever mesmerism,
They've made us think's a new disease—
Sciatic rheumatism.
If old-time stomach aches arise,
They're likely to invite us
Into a hospital to cut
Us for appendicitis.

But here's the latest that is out
From medical profession —

I fortunately have the proofs
Of truth in my possession;
I knew a man who poison took
In error, and, to cure him,
He drank four quarts or more of milk;
A neighbor did assure him

That this would act emetical
And cure him in a minute.
He said 'twould clear his stomach clean
Of all the poison in it.
A thunder storm was raging then;
The sick man, I profess,
Groaned louder than the thunderstorm
And died in deep distress.

They called a neighboring doctor in, Who took his carving knife And cut the dead man open to
Find out what took his life;
Then to the mourning family gave
This diagnosis comic:
He said the man's decease was caused
By smearcase on the stomach,

Perhaps 'twas so, I cannot say—
I am no science stabber;
That doctor said the milk was turned
By thunder into clabber.
At once the gastric forces on
That clabbered milk did seize,
And quickly it was worked into
A mass of cottage cheese.

MORAL.

Ah, me, the new discoveries
 That medicine can make;Ye should be happy to get sick
 For new discoveries' sake.
 —Frank Honeywell, in Memphis New
 Scimitar.

INCREASE OF CANCER.

In its last monthly bulletin the State (New York) Department of Health makes the following statement in regard to cancer: "The cancer problem is assuming more and more menacing proportions, there being reported 572 deaths from this cause in September, 1907, as against 526 in the same month last year and an average for five years of 456. Thus, while deaths from tuberculosis are held practically stationary, we are doing nothing to hold cancer in check as a cause of mortality.



A MEDICAL, CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE.

Established in 1886 by WALTER LINDLEY, M.D., LL.D., Editor and Publisher.

This journal endeavors to mirror the progress of the profession of California, Arizona and New Mexico.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN, Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW, Associate Editors.

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Subscription Price, per annum, \$1.00.
1414 South Hope Street, Los Angeles, California.

EDITORIAL

THE INAUGURATION OF THE TWENTY-FOURTH ANNUAL SESSION OF THE COL-LEGE OF MEDICINE, U. S. C.

This year's will be the twenth-fourth class to enter the Medical department of the University of Southern California. For almost a quarter of a century now, the College of Medicine, U. S. C., has been at work in training men and women for entrance into the profession of medicine.

This institution was the fourth medical college in the United States to adopt a three-year course, and for years it has been a member of the Association of American Medical Colleges. Each succeeding session has seen betterments and improvements, so that today the College is well equipped to give medical and surgical instruction of the highest standard.

THE PRACTITIONER in this issue prints the addresses of the acting dean, Dr. Granville MacGowan, and of the Rev. Joseph S. Glass, President of St. Vincent's College, made at the opening session of this year. It is a fact that is pleasing to the friends of the College, that the higher standards demanded with the passing of time, mean no lessening in the number of students. It is also gratifying that an increasing number of students are entering the classes with college training or degrees. The Freshman class of this session will number more than thirty students, and nearly all of the old students will return, so that the twenty-fourth session gives every promise of a successful year.

During the session just closed, Doctors Elizabeth A. Follansbee, Henry S. Orme and J. H. Utley, who have been identified with the College almost from the beginning, signified their wish to retire from active work, and were elected Emeritus Professors of Pediatrics, Hygiene and Medicine, respectively. Dr. George L. Cole was placed in charge of his former chair of Therapeutics, Dr. Joseph M. King was elected Professor of Medicine, Dr. Luther M. Powers of State Medicine, and Dr. George H. Kress of Hygiene. Other additions to the teaching staff are: Dr. Eliott Alden in Junior Surgery, Dr. Anton in Gynecology, Dr. McArthur in Topographical Anatomy, Dr. Lewis and Dr. J. T. M. Allen in Materia Medica, and Dr. Walker in Embryology.

The interior equipment of the buildings has been much improved, and the didactic, laboratory, dispensary and hospital work give every indication in being carried on more vigorously and efficiently than ever before.

A cordial invitation is extended the profession at all times to utilize the museum and other equipment of the College. For the College of Medicine, U. S. C., construes itself to be but the expression of the desire of the profession to have in its midst that which shall stand for the scientific advancement and highest interests of the medical profession in California.

The College was founded in that spirit, its twenty-four years of creditable existence are an expression of that intention, and it is the desire, more and more of its faculty, to continue the existence and expression of this spirit and idea.

THE INTERNATIONAL TUBER-CULOSIS CONGRESS.

It is imposible to adequately describe the good that will result from the triennial international tuberculosis congress which met at Washington September 21st to October 12th inclusive.

From the delegates who represented California we hope to obtain information which should be of considerable interest to our readers.

We print herewith the resolutions adopted by the Congress as taken from an account in the Washington Post:

"Next followed the reading of resolutions, the principal one perhaps being that advising 'that preventive measures be continued against bovine tuberculosis, and that the possibilities of the propagation of this to man be recognized.'

THE SUBJECT OF DISPUTE.

"This subject has caused the greatest dissension in the congress, and a majority of the delegates, American and foreign, vigorously opposed Dr. Robert Koch's emphatic denial of the unity of the human and bovine tubercle bacillus and his declaration that 'up to date, in no case of pulmonary tuberculosis had it been demonstrated that the infection was due to bovine tubercle bacilli.'

"The adoption of this resolution, which admits of the possibility of infection from tuberculous cattle, is regarded by Dr. Koch's opponents as a decided victory, as it was thought that the German scientist would oppose any attempt at this congress to go on record as recognizing

the intertransmissibility of human and bovine bacilli. By Dr. Koch's adherents the resolution is regarded as a sensible compromise with the extremists of the French school, headed by Dr. F. Arloing of Lyons, who were in favor of naving the congress, by resolution, advise the pasteurization of all milk until such a time as the question at issue between Dr. Koch and his opponents be definitely settled.

RESOLUTIONS BY THE CONGRESS.

"The resolutions in full follow:

Resolved, That the attention of State and central governments be called to the importance of proper laws for the obligatory notification by medical attendants. to the proper health authorities, of all cases of tuberculosis coming to their notice, and for the registration of such cases in order to enable the health authorities to put in operation adequate necessaries for the prevention of the disease.

"'Resolved, That the utmost efforts should be continued in the struggle against tuberculosis to prevent the conveyance from man to man of tuberculous infection as the most important source of the disease.

"That preventive measures be continued against bovine tuberculosis, and that the possibility of the propagation of this to man be recognized.

"'Resolved, That we urge upon the public and upon all governments the establishment of hospitals for the treatment of advanced cases of tuberculosis.

"'The establishment of sanatoria for curable cases of tuberculosis.

"'The establishment of dispensaries and day and night camps for ambulant cases of tuberculosis which cannot enter hospitals and sanatoria.

LEGISLATION THAT IS INDORSED.

"Resolved, That this congress indorses such well-considered legislation for the regulation of factories and workshops, the abolition of premature and injurious labor of women and children and the obtaining of sanitary dwellings as will increase the resisting power of the community to tuberculosis and other diseases.

"That instruction in personal and school hygiene should be given in all schools for the professional training of teachers.

"'That whenever possible, such instruction in elementary hygiene should be intrusted to properly qualified medical instructors.

"'That colleges and universities should be urged to establish courses in hygiene and sanitation, and also to include these subjects among their entrance requirements, in order to stimulate useful elementary instruction in the lower schools.

"'That this congress indorses and recommends the establishment of playgrounds as an important means of preventing tuberculosis through their influence upon health and resistance to disease."

Editor's Note.—Just as The Practitioner is about to come off the press we have read in the *Journal A. M. A.* of October 10, the stenographic report of the "conference in camera" at Washington, held by the group of investigators who have given the most study of all persons in the world, to the relationship of human and bovine tuberculosis.

Personally we believe that the great

master, Robert Koch, more than sustained his own in the arguments that took place at that time. His first point was that "the occurrence of bovine tuberculosis in human beings is exceedingly rare;" his second being "that there is not a single well authenticated case of pulmonary phthisis in the human being in which for any length of time bovine bacilli were expectorated by the afflicted individual."

It was interesting to note the great desire of the English investigators to have resolutions passed, not on these but on related points. We believe Dr. Koch was eminently correct when he replied that the questions under discussion were not to be solved by the passage of resolutions, being questions not of opinions but of facts.

In this "conference in camera" but little was brought forward to refute the contentions of Koch's memorable address at London in 1901, in spite of the fact that an enormous amount of painstaking investigation has been carried on in different countries to show the fallacy if possible, of Koch's opinions.

We opine that Dr. Koch was entirely right when he asserted in 1901, that what the world should strive for first, is the elimination of human tuberculosis and that to accomplish this, in the light of our then and present knowledge, our greatest energies should be directed against the major source of infection, namely, the person ill with pulmonary tuberculosis.

Koch does not deny that bovine tuberculosis should not also be eliminated, for such elimination is desirable both from general sanitary and economic reasons. But he justly contended and still contends that to eliminate bovine tuberculosis would take far more of our energy and financial resources than we are in any way warranted in granting, when eleven-twelfths or more of all tuberculosis is of the pulmonary variety and that up to the present time, the burden of the evidence seems to point decidedly to all this pulmonary tuberculosis being derived from human foci of infection.

Time may show Dr. Koch to be in error, but for the present we must admit that his view point is the more firmly supported by actual facts.

K.

THE BARLOW MEDICAL LI-BRARY OF LOS ANGELES AND SOUTHERN CALIFORNIA.

Several years ago, Dr. Barlow of Los Angeles gave the sum of \$33,000 for the erection and equipment of the library building at 738 Buena Vista street.

The College of Medicine, U. S. C., donated its library of several thousand volumes, and the contributions and subscriptions of the members of the profession throughout Southern California have placed the institution in possession of an admirable working library, sufficient for all ordinary needs. All the important home and foreign journals are to be found on its tables.

What is not found there, to as great an extent as could be justly expected, are the doctors for whom the library was erected. It is true that the location is not in the heart of the city, but property values there were prohibitive for such an institution. A five to ten minutes' ride from First street, on the yellow Garvanza, Griffin avenue or Eagle Rock cars, will place the physician desiring to avail himself of the library's facilities, in front of the door.

Those who desire to investigate special subjects may find their books all ready for them by calling up the librarian, Miss Weir, and explaining to her the subject desired. The telephone number of the library is A9721.

The purpose of these lines is to call attention to the need of co-operation if

this library is to attain to its fullest significance and possibilities in this community. This is a case in which the user profits no one but himself. None can deny the desirability of wide reading and study. The opportunities and facilities are at our door. Let us avail ourselves of them as befits a profession so representative and progressive as that of Southern California.

EDITORIAL NOTES

Dr. James McNaughton of Pasadena died Saturday, September 12th.

Dr. A. L. Tilton, formerly of Kingman, has located in Leupp, Arizona.

Dr. R. W. Craig of Phoenix is spending a few weeks in Los Angeles.

Dr. Fales of Clifton, Arizona, has discovered a case of suspected leprosy.

Dr. Theodore G. Davis of Los Ángeles has returned from a month's outing in the mountains.

Dr. I. A. McCarty of Los Angeles has been enjoying his vacation in the wilds of Idyllwild.

Dr. C. E. Ide of Redlands is consulting physician at the Arrowhead Hot Springs Sanatorium.

Dr. and Mrs. Dudley Fulton of Los Angeles have returned from an auto trip to San Francisco.

Dr. and Mrs. Guy Cochran of Los Angeles have been taking an automobile tour through Canada.

Drs. John R. Haynes and West Hughes of Los Angeles have just returned from New York City. Dr. W. H. Kiger of Ocean Park, California, is spending a few weeks in the hospitals of New York City.

During the serious illness of Dr. Powell of Benson, Arizona, Dr. A. P. Gimple has had charge of his practice.

Dr. N. A. Walker has resumed practice at Ocean Park. Dr. Walker graduated from Toronto University in 1857.

Dr. Lawrence B. Flick says there were 3900 deaths from tuberculosis in the city of Philadelphia during 1906 and 3600 during 1907.

Dr. J. F. Kennedy, who for 22 years was secretary of the Medical Board of Iowa, died in Los Angeles September 26th.

Drs. Willard Smith of Phoenix and Julius B. Nelson of Mesa were elected members of the Maricopa County Medical Society at its last meeting.

Dr. Fred P. Bowen of Rhyolite, Nevada, was married September 15th to Miss Eulah Burker, daughter of Mr. and Mrs. J. H. Burker of Los Angeles.

Drs. H. Wilson Levengood of Jerome, Clymer D. Jeffries of Williams, Paul G. Capps of Crown King, and Arthur D. Bechtel of Prescott were elected to membership in the Yavapai County Medical Society at its last meeting.

Dr. John H. Lacy of Solomonville, Arizona, has been appointed physician and surgeon to the National Mining Company, eight miles from Solomonville.

Dr. John C. King of Banning has been spending a few days in Los Angeles. Banning has a sanatorium for the tuberculous under Dr. King's supervision.

Dr. H. Clifford Loos of San Diego and Miss Anita Johnson of Riverside were married at the residence of the parents of the bride at high noon September 15th.

Dr. Robert J. McAdory and Miss Josephine Morganstern of Los Angeles were married September 26th. Dr. McAdory has located at Guaymas as surgeon for the Cananea, Yaqui & Pacific Railroad of Mexico.

Dr. Frank B. Sawyer, formerly of Prescott, Arizona, and for the last two years Medical Director of the Castle Creek 110t Springs, has accepted the position of Medical Superintendent of the Paso Robles Hot Springs.

Dr. L. G. Van Scoyoc, a Homeopathic physician of Los Angeles, died of heart disease while in a barber's chair, September 9th. He was 55 years of age, a native of Pennsylvania, and had been in Los Angeles five and a half years.

Drs. Leonard, Stookey and Jones will offer courses in Bacteriology, Pathology, Histology, Hygiene, Physiology, Chemistry, Toxicology, Anatomy, Obstetrics and Gynecology, preparatory to the California State Medical Board Examinations. The fee for all courses will be \$100. Arrangement may be made for instruction in separate sub-

jects. The first exercise will be held Saturday, October 17th, at 4 p.m., in the Pathological Laboratory, 631 Auditorium Building.

Drs. Norman Bridge, F. C. E. Mattison, A. T. Newcomb, H. B. Stehman and Charles Lee King, all of Pasadena, have returned from attendance on the International Tuberculosis Congress, Washington, D. C., to which they were delegates

Dr. James W. Acker and his son Dr. Chas. Acker, of Gadsden, Alabama, are visiting in Prescott, Arizona. The Doctors Acker are seeing Arizona and California, and are already greatly impressed by the wonderful climatic conditions of the southwest.

Dr. Francis H. Redewill, the enthusiastic and energetic secretary of the Maricopa County Medical Society, has purchased the office fixtures, instruments and library of Dr. Charles Stewart, and will in future occupy the offices lately vacated by Dr. Stewart.

On Thursday evening, October 1st, the Pasadena branch of the Los Angeles County Medical Society celebrated the twentieth anniversary of its organization. The honored guests were Drs. D. B. Van Slyck, Fordyce Grinnell, George Deacon, F. F. Rowland and S. P. Sweeringer, all charter members.

Drs. W. W. Beckett, president of the California State Medical Society, Philip Mills Jones, secretary, and E. L. Leonard, Professor of Bacteriology in the College of Medicine of the University of Southern California, addressed the Santa Barbara County Medical Society at enthusiastic meetings September 14th and 15th.

Dr. E. S. Bullock of Silver City, New Mexico, attended the International Tuberculosis Congress, Washington, D. C. He also, by invitation, read a paper on "The Climate of New Mexico," before the Wayne County (Detroit) Medical Society and was the guest of honor at a banquet given by the Detroit physicians.

Clayson's ranch, on the outskirts of Phoenix, Arizona, long noted for its finely-flavored oranges and delicious grape-fruit, has been purchased by Dr. Frederick A. Stafford of Toledo, Ohio. Under the name "Desert Inn" Dr. Stafford will here conduct an open-air resort for those seeking rest and recuperation in this delightful desert climate.

We gladly call attention to a letter in this number of the Southern California Practitioner from Dr. Ross Moore. Dr. Moore is the professional associate of Dr. H. G. Brainerd and is Lecturer on Diseases of the Mind and Nervous System of the College of Medicine of the University of Southern California and is eminently equipped for supervising the work in hand.

Dr. W. B. Dakin, College of Medicine of the University of Southern California, Class of 1908, is now resident at the Alexian Brothers' Hospital, Belden and Racine Avenues, Chicago. Dr. Dakin writes Dr. Geeorge W. Lasher that he has passed the Illinois Medical Examining Board. "No marks are given out so cannot tell you my rating. I am enjoying my hospital work very much. My service demands my being on duty at 5:30 every morning."

At the recent annual meeting of the New Mexico Medical Association Dr. J. B. Cutter of Los Angeles was elected an honorary member. The following are the officers elected: President, Dr. G. K. Angle, Silver City; first vice-president, Dr. J. W. Elder, Albuquerque; second vice-president, Dr. F. T. B. Best, East Las Vegas; third vice-president, Dr. R. L. Bradley, Roswell;

secretary and editor, Dr. G. S. Mc-Landress, Albuquerque; treasurer, Dr. C. G. Duncan, Socorro. After the scientific sessions the New Mexicans joined in a delightful banquet that lasted until about 3 a.m., at which hour the champagne—intellectual and Mum's—was exhausted. Dr. James H. Wroth of Albuquerque was toastmaster.

We gladly call attention to the advertisement of the Pacific Mutual Life Insurance Company. Physicians are liberal insurers. They see so much of the improvidence and misery of this world that they take the lesson home and endeavor to protect their own families. It is wise for a man to not place his insurance all in one company. The Pacific Mutual is wealthy and reliable, and by insuring in it we reduce the great volume of cash that crosses the Rocky Mountains to pay premiums in Eastern companies.

Dr. L. P. Kaul of Jerome, Arizona. was the guest of the physicians of Prescott while attending the last meeting of the local medical society. He was entertained at lunch at Palmsetgaaf in the afternoon, and in the evening was the guest of the Yavapai County Medical Society at a dinner given in his honor at the Yavapai Club. Dr. Kaul recently resigned his position as Assistant Chief Surgeon of the United Verde Copper Company at Jerome, which he had held for the past ten years, and will engage in private practice in Stockton, California. During his residence in Jerome Dr. Kaul had a large clinical experience, both hospital and private, and he goes to his new field particularly well equipped to do good work. As was made very manifest during this visit he carries with him the very kindliest wishes and genuine respect of his Arizona colleagues.

Dr. F. M. Pottenger in his recent Eastern trip to the International Tuberculosis Congress delivered addresses before the Woman's Federation and the New York City Homeopathic Society, at which latter meeting Dr. Jacobi presided and Professor Denys of Belgium also gave an address. Returning from the East he will give addresses at Dayton and Westerville, Ohio, at Louisville, Kentucky, where the meeting of the Mississippi Valley Medical Association will be held, and at San Francisco, California.

Dr. Chas. C. Browning of the Pottenger Sanatorium has returned from three months' study of methods in European sanatoriums. Dr. Browning says: "The special object I had in view was to visit the sanatoria over there, to observe what is being done and how they are conducted from a strictly professional standpoint. In some particulars they are ahead of us, except in some of our cities where a special study has been made of tuberculosis. The European sanatoria are doing excellent work, especially in England and Switzerland. In the matter of educating the masses and of housing tuberculous patients they are more advanced than we are, but American hospitals individualize more and give more personal attention to patients."

The delegates appointed by the California Association for the Study and Prevention of Tuberculosis to attend the International Congress of Tuberculosis which met at Washington, D. C., September 21st to October 12th, include the following: San Francisco—Dr. George H. Evans, Dr. E. Rixford, Dr. J. H. Barbat, Dr. James A. Block. Los Angeles—Mr. C. B. Boothe, Dr. George L. Cole, Dr. W. Jarvis Barlow, Dr. George H. Kress, Dr. W. LeMoyne

Wills, Dr. L. M. Powers, Dr. D. C. Barber. Pasadena—Dr. F. C. E. Mattison, Dr. A. T. Newcomb, Dr. Norman Bridge, Dr. W. A. Ross. Monrovia—Dr. F. M. Pottenger, Dr. C. C. Browning. Riverside—Dr. W. W. Roblee. Sacramento—Dr. N. K. Foster. Berkley—Dr. A. R. Ward. San Diego—Dr. Fred. Baker. Redlands—Dr. Gayle Moseley. Stanford—Dr. W. F. Snow.

The New York City Board of Health is distributing the following rules:

Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick-room. His body is covered with disease germs.

Do not allow decaying material of any sort to accumulate on or near your premises.

All refuse which tends in any way to fermentation, such as bedding, straw, paper waste and vegetable matter should be disposed of or covered with lime or kerosene oil.

Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with lime or oil.

Keep all stable manure in vault or pit screened or sprinkled with lime or kerosene or other cheap preparation.

See that your sewerage system is in good order; that it does not leak and is up to date and not exposed to flies.

Pour kerosene into the drains.

Cover food after a meal; burn or bury table refuse.

Screen all food exposed for sale.

Screen all windows and doors, especially the kitchen and dining room.

Don't forget that if you see flies their breeding place is near-by filth. It may be behind the door, under the table or in the cuspidor. If there is no dirt and filth there will be no flies.

CORRESPONDENCE

A VISIT TO EDINBURGH.

LONDON, W. C., Sept. 8, 1908.

To the Editor of the Practitioner:

One of the first things I do if possible, and especially when I disembark in an English port, is to visit my native town, a small hill town of South England, near Oxford. Here is the old homestead, the old English church, in which I was christened, on the highest point of the hill, in whose churchyard a large number of my ancestors are laid. The little town seems so quiet and sleepy, and many of those whom I knew in former years, have either passed beyond or departed for distant shores. As we passed through the churchyard into the dear old church I could scarce keep the tears back. The last time I visited this sacred spot my grandparents were both living. This time I saw only the earth mounds beneath which their remains lay. I choked down a sob and turned aside from the cherished spot.

We first visited Edinburgh, and again renewed acquaintances with some of the members of the staff of the Royal Infirmary, and enjoyed the time spent there very much indeed. They have what seemed a splendid system of registering patients, i. e., each patient is given a number on entering the hosrital (Royal Infirmary), which number is placed in plain view over patient's cot or bed. The relatives are sent this number or learn of it. Then, in the daily papers of Edinburgh, a space is devoted to recording the condition of the various patients in the Royal Infirmary by number, which can be so condensed as to take up a very small space in the papers. For example:

$$\begin{bmatrix} 2374 \\ 2481 \\ 2234 \\ \text{etc.} \end{bmatrix} \text{Dangerously ill,} \begin{bmatrix} 2173 \\ 2246 \\ 2175 \\ \text{etc.} \end{bmatrix} \text{Seriously ill,} \\ \begin{bmatrix} 2186 \\ 2341 \\ 2789 \\ \text{etc.} \end{bmatrix} \text{Out of danger,} \begin{bmatrix} 2172 \\ 2285 \\ 2734 \\ \text{etc.} \end{bmatrix} \text{Improving,} \\ \begin{bmatrix} 2134 \\ 2478 \\ 2745 \\ 2781 \\ \text{etc.} \end{bmatrix} \text{Convalescing,} \\ \begin{bmatrix} 2781 \\ 2781 \\ \text{etc.} \end{bmatrix}$$

and so on. Thus the relatives and friends are kept informed morning and night, through the press, in a very simple and efficient way. They are not allowed to annoy the hospital staff or officers about their sick in the infirmary; and one readily sees it is not necessary, for them to do so.

There is a very excellent vacation post-graduate course in medicine and surgery during the month of September, given by members of the medical and surgical staff of the Royal Infirmary of Edinburgh, and a very excellent course it is. All the special branches are covered by leaders in their special line. For instance, Dr. Campbell Geddes conducts a class in medically-applied anatomy, covering major organs and central and cranial nerves. Dr. David Waterstone and Mr. Beesly on surgical applied anatomy and X-ray demonstrations, covering applied anatomy of the abdomen, upper and lower extremities, thorax, heart, lungs, etc. Dr. James Ritchie, a most excellent course in Bacteriology. Dr. Logan Turner and Dr. J. S. Fraser, diseases of the ear, nose and throat. Dr. George Mackay and Dr. Sym, Clinics at the Royal Infirmary. A splendid four weeks' course on diseases of children. Dr. Lovell Gulland,

a special course on diseases of the blood, of its pathology and significance, and the application of examination of the blood to diagnosis. Dermatology is ably covered by Dr. Norman Walker, Dr. F. Gardner and Dr. Cranston Low. Dr. J. S. Fowler gives special lectures on infant feeding. Gynecology is cared for by Dr. N. T. Brewis, which also covers an operative course. Dr. Bryon Bramwell lectures on Neurology. Postmortems are conducted in the interest of post-graduate students during the month of post-graduate work, September. Mr. Alexis Thomson and Mr. Miles give clinical, practical and operative surgical work to the postgraduate students during this month. Laboratory courses and laboratory work are well covered. Three guineas, or a little over \$15, covers the general course. One guinea, or a little over \$5 each, covers the special course.

> W. Edward Hibbard; B.S., Ph.G., M.D.

DEFECTIVE AND BACKWARD CHILDREN.

Los Angeles, Cal., Sept. 19, 1908. To the Editor of the Southern California Practitioner:

It is with great satisfaction that I write to inform you, and through you the profession of this part of the country, that it is now possible in Los Angeles to give abnormal and defective children the most expert and individual care and teaching.

Children who, by reason of some peculiarity, cannot fall into the usual routine of public or private school instruction are entirely unprovided for by our school system unless they are incorrigible or actual or potential criminals. The ungraded school is a step toward providing for this class, but yet is inadequate.

Arrangements have been perfected whereby I have secured the services of

teachers of wide experience in handling children who are backward in talking or learning, those lacking in attention and power of concentration, those who cannot articulate properly, and, in short, all types of abnormality. children will be taken who are unlikely to show improvement. Individual care will be given each case-no more than six pupils being assigned to a Careful physical and single teacher. neurological examination will be made as often as indicated and the course of instruction guided by the results of same. A first-class and well-regulated home is provided with a graduate nurse of long experience to watch over the physical condition of the children.

I shall be pleased to correspond with physicians or parents regarding this matter. In writing it would be well to give a brief history of the child in question in order that his eligibility may be determined.

Very sincerely yours,

Ross Moore,
609 Pacific Mutual Bldg.

Los Angeles, Cal., Sept. 29, 1908.

Dear Doctor:—By reason of ill-health, I am compelled to retire for the present from the active practice of my profession.

I am offering my office furnishings with my books and instruments for sale. To a physician desiring a first-class location, cheap rental (\$26.25 per month including both phones) and an office all ready for him to step into and begin work immediately, this is a rare opportunity.

Doctor, will you kindly mention this to any of your professional friends whom you think in need of a location.

Address Dr. Wm. R. Molony, 429
Mason Bldg. Phones: Main 2035 and
F5970. Yours fraternally,

JAMES P. BOOTH.

1220 W. 16th St. 'Phone 26693.

SOCIETY PROCEEDINGS

SOCIETY PROCEEDINGS.

The regular quarterly meeting of the Yavapai County, Arizona, Medical Society was held at Prescott, September 12, 1908, in the offices of the president, R. N. Looney.

L. P. Kaul of Jerome presented a very interesting and unique case-report on "The After-treatment of a Laparotomy for Stab-wound into the Abdominal Cavity."

Arthur D. Vechtel of Prescott read a carefully prepared paper on "Tuberculosis and Pregnancy," in which he discussed in detail the effects of different tuberculous conditions on both mother and child, and which brought forth a very free discussion of this most interesting subject. The paper will be published in full in a future number of The Practitioner.

The milk supply of the county—more especially that of its towns—was then considered by the society.

John W. Flinn of Prescott read a paper on "Impure and Inferior Milk," pointing out the great difficulty experienced in getting clean milk, and the effects on the milk of uncleanly methods in gathering and handling it. He spoke of the impurities, gross and microscopical, commonly found in milk, and the diseases caused by them.

H. T. Southworth of Prescott then read a very practical paper on "A Model Dairy," sketching at considerable length, first, an ideally model dairy, and then describing in detail a dairy as nearly ideal as could be expected under local conditions. Constant cleanliness and a low temperature (45° F. or lower) were insisted on as being absolutely essential in the care of milk.

In the free discussion which followed it was agreed that all milk dealers in towns should be licensed, and that licenses should be issued only to those dealers supplying milk from dairies which could pass a satisfactory inspection at frequent intervals. The society decided to take up the matter with the various health boards in the county, at an early date.

Considerable routine business was transacted.

The first after-vacation meeting of the Maricopa County Medical Society was held in Phoenix Monday evening, September 14th, with the president, John W. Foss, in the chair.

Three resolutions were presented to the society, and after full discussion were voted on separately and adopted.

The first provides that in attending a case of abortion or miscarriage a member of the society shall always call another reputable physician in consultation.

The second resolution warns members of the society who have indulged in newspaper and other unprofessional advertising to discontinue this practice.

The third resolution pledges the society to do all in its power to have any physician in the county, who performs a criminal abortion, punished by law.

The question of dropping from the membership list the names of men who are delinquent in their dues was discussed very fully, and it was decided to urge all delinquents to pay up or drop at once from membership.

It was decided to have monthly meetings in the future, to give a banquet at each meeting, have good music, interesting clinics and laboratory demonstrations and make a systematic effort to have every member attend all the meetings.

Drs. R. Thomas and Willard Smith were appointed members of the program committee.

A committee on legislation composed of Drs. Swetnam, Thomas and Ellis was appointed.

Dr. Beauchamp reported the clinical symptoms of a very interesting case.

The attendance at this meeting was good and the prospects for a good winter's work are very bright.

The next regular meeting will be held October 17th.

MISCELLANEOUS

THE DEADLY SKUNK-BITE.

Bitten by a skunk on the forehead, immediately above the nose, was the painful experience of J. B. Scantling, Friday morning at 3 o'clock, in his tent in Lawler gulch, two miles from the Hillside mine. Scantling was here yesterday arranging to leave this afternoon for the Pasteur Institute in Chicago for treatment. He returned to Hillside last night to bring his seventeen year old son here to remain until his return from Chicago.

Scantling's forehead is not badly swollen but the marks of the four teeth of the infuriated varmint are plainly visible. The teeth penetrated the flesh almost to the skull before the Mephitis Americana was despatched by Scantling, who crushed it to death with his hands while the fangs were still imbedded in his forehead.

Scantling and his son were asleep in bed when Scantling was aroused by something walking on his left arm. which was resting on his face. He thought it was his son's arm at first, and raised his arm to push his son's away. The intruder jumped on his face and imbedded its teeth in his forehead. He grasped it with both hands and crushed it to death while still hanging to his face. After releasing his death-hold he found it to be a small striped skunk, generally known as the hydrophobia species. He does not anticipate any bad effects from the bite, but intends to submit to the Pasteur remedy as a precaution against future complications.

Scantling is a hunter and trapper. He showed the scars of many bites of different wild animals last night to a group on the train, all of which are healed. He stated that this is the first time he was ever bitten by any member of the many skunk families, although he had trapped and killed several.—The Arizona Miner-Journal, Sept. 1st.

SOURED MILK AND LON-GEVITY.

Our valuable and esteemed contemporary, the Southern California Practitioner, of which Dr. Walter Lindley is the editor and publisher, tells us in a well-considered editorial that the way to prolong life is to make sour milk the chief article of diet. This emanates from no less authority than Elie Metchnikoff, sub-director of the Pasteur Institute, at Paris. His masterly work, "The Prolongation of Life," is attracting much attention in the scientific world, and as The Southern Practitioner praises the volume highly it is fair to assume that its editor and his associates place great faith in the French savant's conclusions. From now on we shall watch with interest the daily menu of Dr. Lindley and Drs. Pottenger, Kress, Flinn, Ellis, Cole and Barlow, assistant and associate editors. If they wish to prolong their lives, which, of course, means their usefulness to society, we shall see them henceforth eschewing the succulent roasts and dainty dishes prepared by the chefs of the local clubs, and confining themselves principally to a sour milk diet. We have long believed that a simple and sober life are

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favorable to longevity, but occasionally our theory gets a rude jolt. This, M. Metchnikoff asserts, is due to the intestinal flora of the large intestine which poisons the tissues, through the agency of microbes. Kill these off by eliminating the useless intestine through the use of lactic acid, and decay is arrested, old age ameliorated and a marked economic gain is effected. Think what a vast saving would accrue to those countries where old age pensioners are a charge on the public purse! Instead of becoming due at 60 or 70, signs of senility would be deferred for several hundred years, thus saving the governments immense sums. We have every reason to believe that our venerable Biblical friend, Methuselah, who lived nine hundred sixty and nine years, was constantly addicted to a sour goat's-milk diet, as also was Jared, who was only

seven years younger than Methuselah when he peacefully passed away. Adam lived to be 930 years, Seth is credited with 912, Cainan 910, and Enos, 905, while countless other forefathers of the race, encountered in Genesis, reached the comparatively ripe ages of seven and eight hundred. Noah's seafaring life doubtless shortened his years as he died in his prime, just as he had rounded the five hundred period. We confidently expect to renew this discussion with Dr. Lindley and his esteemed associates three or four hundred years hence.—The Graphic (Los Angeles).

THE NEW ENTRANCE RE-QUIREMENTS OF THE ASSO-CIATION OF AMERICAN MEDICAL COLLEGES.

At the April meeting of the Association a new list of entrance requirements, for such students as did not have a diploma from a four-year high school course, were adopted. They are as follows:

The student is allowed to enter on a total of 24 points, but must work off

The student is allowed to enter on a total of 24 points, but must work off the conditions in the remaining 6 points before beginning the second year (a final total of 30 points being required).

One point in any subject demands one period per week of not less than 45 minutes, for 18 weeks. Two points equal 5 counts, or 1 unit, or 2 credits. If only four hours per week are given in a subject, the year's work represents 4 counts (the minimum), and must be counted as such and not as 5 counts (the maximum).

A. Required, 16 points. (Examinations must be taken in all these subjects.)

Mathematics—(Minimum, 2 yrs.;	ts
maximum, 3 yrs.)	4
Algebra and Plain Geometry.	
English—(Minimum, 2 yrs.; maxi-	
mum, 4 yrs.)	4
(a) English Grammar.	
(b) Rhetoric and Composition.	
Latin—(Minimum, 2 yrs.; maxi-	
mum, 4 yrs.)	4
(a) Latin Grammar.	
(b) Latin Prose Composition.	
(c) Reading four books of Cæsar,	
or equivalent.	
Physics—(I yr.) With laboratory	
work	2
History—(I yr.) Including civics	
and political economy	2
Total required	16
B. Elective, 14 points. (The applicant has his choice of subjects here.)	

English Language and Literature—

Only if taken after the required English

(2 yrs.)

Language-German, French, Span-	
ish or Greek (4 yrs.), not less	
than one year in any one	2
Advanced Mathematics—Solid Ge-	
ometry and Trigonometry (1/2	
yr. each)	I
Natural Science—(1 yr.) Biology	
I yr., or Botany and Zoology	
√2 yr. each	2
Physical Science—(I yr.) Chem-	
istry	2
Earth Science—Physical Geography	
and Geology (½ yr. each)	I
Physiology and Hygiene—(1/2 yr.)	I
Astronomy—(½ yr.)	1
Drawing—(1/2 yr.)	I,

TWO ANTI-VIVISECTIONISTS.

HE.

His horses' tails are docked. His terriers' ears

Clipped, or their tails curtailed at the behest

Of foolish fashion. Sometimes he doth feast

On pate-de fois gras; at other times

On boiled live lobsters. To amass his wealth

The stunted children, prematurely aged, Toiled through the night in his Southern cotton mills.

They strive and swelter in his glass factories,

They grind from steel the flying dust of death—

But he is all compassion. Lo! he joins

The anti-vivisection agitation.

SHE.

Above her towering hat there floats a cloud

Of feathers, torn from out the quivering flesh

Of a live bird; and underneath its rim Nestles a wreath made by a little child Robbed of its youth and play. Her stylish coat

Was sew'd by sweater's s'aves, who, late at night,

While she was sleeping, trod the footmachines

In fetid air for a starvation wage.

But lo! her heart is tender. She has joined

The anti-vivisection agitation.

E. M. G .- New York Times.

The statistics just published by the Official Journal of the Republic show that the birth rate in France during the year 1906 was the lowest on record. During recent years there has been a steady decline in the number of births and the average yearly figures from 1896 to 1905 were 839,843. In 1906 the births fell to 806,847, while the deaths were 780,196.

RATTLESNAKES.

Virgil W. Owen, assistant clerk of the United States district court, is planning to condense the results of fourteen years in collecting and studying venomous snakes into a book for popular reference.

Mr. Owen has returned from a collecting journey in Arizona, on which he gathered a large number of specimens and obtained a great deal of information, particularly in regard to rattlesnakes and beetles.

"Many of the popular conceptions as to rattlesnakes are entirely erroneous," said Mr. Owen yesterday, "and this is unfortunately true about common remedies for snake poison. It is generally thought that the bite of a rattlesnake is always fatal, but this is not the case. The records kept by the Smithsonian institution show that but about 20 per cent of the persons die who are bitten by rattlesnake. Many of those who do die might have

been saved if the importance of the element of time had been regarded.

"Home remedies which are often applied might prove effective were it not for the fact that the system will absorb the virus much faster than the antidote applied will do so. Then when a doctor is called the poison has gone too far to be counteracted. It is important to know several matters in connection with a rattlesnake bite, and these cannot all be determined by a physician who may be called sometime after the patient has been bitten. For instance, the size of the snake has an important bearing, but after the wound is much swollen it is impossible to determine anything about the fangs.

"The importance of quick action may be appreciated when you consider the fact that in fifty-one seconds venom injected in a vein in the most remote part of the body will have passed through the heart and permeated the system. Hence, the ordinary household remedies are not effective because they are applied only at the wound.

NO SURE ANTIDOTE.

There is no absolutely sure antidote known, and some which have proved of greatest effect are in themselves exceedingly poisonous. The action of snake poisons and proper antidotes to them have been incorporated into but very few of the toxicological courses of medical colleges. Not one physician in a thousand is called in attendance in such cases, so that even physicians are not always in a position to administer the most effective remedies when first met with."

Mr. Owen's book will deal at length with the treatment of snake bites, giving complete instructions for immediate action. Another feature of value to the traveler will be a full list of the venomous snakes of the United States which are dangerous to man and the larger beasts.

A popular error is that all narrow-headed snakes are harmless and that all with broad, angular heads are venomous, but Mr. Owen shows that this rule is not applicable in either case. The most venomous snake in this country, the harlequin, which is allied to the cobra of India, is a comparatively small, slender snake with hardly any constriction between the head and body.

"Charming or fascinating by snakes is another fallacy," says Mr. Owen. "I believe that when birds have been seen to fly into the distended jaws of a serpent it would invariably be found upon a careful examination that the bird had young close by and disregarded its own safety in an endeavor to protect its young.

STRIKING POWER LIMITED.

"It is not unusual to hear statements that snakes have been known to jump three or four times their own length. After a number of years of experience and reference to the observations of others I have rever noted a snake striking over two-thirds its length from a level surface. Charming snakes by music is another story often heard. This may bear some truth, but the sound of music can play no part, as snakes do not possess external ears. They are, however, quite sensitive to vibrations, so any effect from music can only arise from the vibrations produced.

"Most people think that the age of a rattlesnake may be determined by the number of rattles, but this is far from correct. Rattlesnakes and others usually shed their skins more than once a year, and I have known this to occur four times in as many months, and each time that the skin is cast off a new segment to the rattle is added. It is safe to say that snakes will shed on an average of twice a year between the commencement of summer and the close of autumn.

"There are many differences as to nature's use for the rattle, but I believe that it was never intended primarily as a warning to animals or human beings. Undoubtedly it was designed for the snake's protection in inspiring fear, and, among other uses, to fascinate and attract to the snake some of the creatures upon which it lives."—The Los Angeles Herald.

THE NEW TEN COMMAND-MENTS.

"I. I will not permit myself to speak while angry. And I will not make a bitter retort to another person who speaks to me in anger.

"2. I will neither gossip about the failings of another nor will I permit any any other person to speak such gossip to me. Gossip will die when it cannot find a listener.

"3. I will respect weakness and defer to it on the street car, in the department store and in the home, whether it be displayed by man or woman.

"4. I will always express gratitude for any favor or service rendered to me. If prevented from doing it on the spot, then I will seek an early opportunity to give utterance to it in the most gracious way within my power.

"5. I will not fail to express sympathy with another's sorrow, or to give hearty utterance to my appreciation of good works by another, whether the party be friendly to me or not. One buttonhole bouquet offered amid life's stress of trial is worth a thousand wreaths of roses laid on the coffin of the man who died discouraged and broken-hearted.

"6. I will not talk about my personal ailments or misfortunes. They shall be one of the subjects on which I am silent.

"7. I will look on the bright side of the circumstances of my daily life, and I will seek to carry a cheerful face and speak hopefully to all whom I meet. "8. I will neither eat nor drink what I know will detract from my ability to do my best work.

"9. I will speak and act truthfully, living with sincerity toward God and man.

"Io. I will strive to be always prepared for the very best that can happen to me. I will seek to be ready to seize the highest opportunity, to do the noblest work, to rise to the loftiest place which God and my abilities permit."

Rules prescribed by Dr. John Quackenbos in Hypnotic Therapeutics.

DR. KEEN A BIBLIOPHILE.

In the course of a letter from Paris, dated August 24, 1908, addressed to *The Old Dominion Medical Journal*. Dr. W. W. Keen says:

During my long holiday from work, now happily drawing to a close, as I sail for home next month, I have been so constantly traveling that I have not been able to see much surgery. But I have been able in the old bookshops in Berlin, Florence, Rome, Paris and London to hunt up some treasures for the library of the College of Physicians of Philadelphia, which, as you know, is one of the foremost medical libraries in the world. Through the liberality of friends I have been able to add 24 incunabula (i. e., works published before the 16th century) to our already large collection, so that we now have one of the best collections in the world, among them several books which are unique copies.

Among other rariora are a splendid folio edition de luxe of Avicenna in the most beautiful Arabic text I have ever seen. (N. B. Your readers now know where they can consult him "in the original," instead of in more or less imperfect translations!) It was bought at the sale of the library of the Dukes of Altemps last winter in Rome and bears the ducal coat of arms on the binding, also a facsimile of the finest

existing medical manuscript, the Vienna Diascorides Codex, dating from the fourth century, now published by Sythoff in Leyden.

Another acquisition of great value is a series of the Theses de Paris complete from 1885 to 1907—over 800 volumes. These Theses have been published since 1798 and comprise now usually from 40 to 50 volumes a year. From the beginning there are over 35,000 Theses. With this addition to the library there will be on our shelves nearly one-half of this vast collection. The earlier ones after so long a time are, of course, difficult to obtain.

When our new building is completed—in about a year from now—it will give us the finest home of any medical society in America. I hope your readers may visit us and see the many rare and valuable treasures we have and can then display to advantage.

To all medical men Bologna, one may say, is a Mecca. The university is the oldest in Europe. In 1888 they celebrated the eight hundredth anniversary of its foundation in 1088, and among many honorary degrees, gave one to a man whom the profession all over the country delighteth to honor, Dr. S. Weir Mitchell.

There in 1315 Mundimus first proclaimed the importance of teaching anatomy from the actual human body instead of from drawings and from animals. In the work of the new building of the College of Physicians will appear a replica of his sepulchral mural tablet, which is on the façade of the Church of San Vitale in Bologna. Those curious to know more of this pioneer anatomist will be greatly interested in Dr. Pilcheer's scholarly article in the Medical Library and Historical Journal for January, 1907, in which this memorial piece of sculpture is reproduced. These memorial tablets are peculiar to Bologna. I have never seen anything like them elsewhere. There are more than a score of these, commemorating doctors of medicine, of civil law and of canon law, and representing the teacher expounding to his pupils. In the library of the College of Physicians and in that of the Jefferson Medical College may be seen several photographs of all the medical tablets and some of the others.

In both libraries, too, may be seen photographs of the splendid old Anatomical Theatre of Bologna. Many of the older anatomists, Fallopius, Fabricius and Vesalius, for instance, lectured there. It is lined with fine

carved cedar and is preserved as a historical monument and no longer used.

No medical visitor should omit to see the fine collection of wax models. Its only rivals are in Guy's Hospital, London, and the Hospital St. Louis, Paris.

Women practitioners should be especially glad to visit Bologna, for it has had a number of women professors in law and medicine even from the earliest times. Of one of them the story runs that her beauty was such that she had to be hidden behind a curtain so as not to distract the students' attention from the lecture to the lecturer."

BOOK REVIEWS

CONSUMPTION: HOW TO PREVENT IT AND HOW TO LIVE WITH IT. Its nature, causes, prevention, and the mode of life, climate, exercise, food, and clothing necessary for its cure. By N. S. Davis, A.M., M.D., Professor of Principles and Practice of Medicine, Northwestern University Medical School, Chicago; Physician to Mercy and Wesley Hospitals; Member of the American Medical Association, American Climatological Association, Illinois State Medical, Chicago Medical Society, Chicago Pathological Society, Chicago Neurological Society, Chicago Academy of Sciences; Fellow of the American Academy of Medicine; Author of a Hand-Book on "Diseases of the Lungs, Heart and Kidneys," and a treatise on "Diet in Disease and Health." Second Edition, thoroughly revised. 12mo. 172 Pages. Bound in Extra Cloth. Price, \$1.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

This is an excellent treatise in that a presentation of scientific facts is given in language easily understood by the average lay reader. The pure-air, good food and proper rest and exercise treatment is sanely discussed and the limitations of these and other measures indicated.

Davis has written one of the best manuals on the subject which has come from the press intended for lay readers, and the volume may be safely recommended as giving precisely the advice to consumptives which is so greatly needed by most of the victims of the great white plague.

GOLDEN RULES OF DIETETICS. By A. L. Benedict, A.M., M.D., Buffalo, Member of American Academy of Medicine, etc. C. V. Mosby Medical Book and Publishing Co., St. Louis. 1908. Cloth, 407 pages.

In some forty-five chapters, the author takes up in considerable detail a consideration of foodstuffs, their composition and nutritional values, the physiology of digestion, the hygiene of eating, the art of cooking, and dietaries for man in health at different ages, as well as dietaries for disease groups and special diseases.

The volume is a good discussion of an important topic.

CONSUMPTION, ITS PREVENTION. Cure without medicine. By Chas, H. Stanley Davis, M.D., Ph.D., Member of the New Haven County Medical Association, etc. Second Enlarged Edition. New York. E. B. Treat & Co., 241 W. 23rd Street. 1908. Cloth, 218 pages.

This book is intended primarily for the lay reader and is a discussion of causation, symptomatology and treatment presented in such manner as to be of use to the layman who desires a better understanding of the disease. The principles of the hygienic-dietetic treatment are explained and the general regimen of life for the consumptive elaborated. The volume is well adapted to the purpose for which it was written.

MANUAL OF PSYCHIATRY. By J. Rogues de Fursac, M.D., Formerly Chief of Clinic at the Medical Faculty of Paris, Physician in Chief of the Public Insane Asylums of the Seine Department. Authorized translation from the French by A. J. Rosanoff, M.D., Second Assistant Physician, Kings Park State Hospital, N. Y. Large 12mo xiv-106 pages, cloth \$2.50 (10/6 net). Second American from the Second French Edition. Revised and Enlarged. New York: John Wiley & Sons. London: Chapman & Hall. Limited. 1908.

Fursac uses the Kraefelin classification of mental diseases and presents a discussion of his subject based on that classification, which he deems not without faults and yet a real advance on anything heretofore brought forward. He divides his volume into Ceneral and Special Psychiatry, contending that the former must precede any intelligent study of the latter. Fursac has written in his 400-page book a compact and logically arranged treatise on a confusing branch of medicine.

THE EFFICIENT LIFE. By Luther H. Gulick, M.D., Director of Physical Training in the New York City Schools. New York: Doubleday, Page & Co. 1907. Cloth, 195 pages.

Gulick has dedicated his book to Theodore Roosevelt, "who sometimes leads the simple life, who often leads the strenuous life, but who always leads the efficient life."

The various chapters are founded largely on lectures delivered before the School of Pedagogy of New York University.

He states that "to live a full, rich, efficient life is an end," and the discussion of exercise, of foods, of fatigue, of sleep, of stimulants, of baths, of pain, of vitality, and other

chapter headings is a presentation of facts from that view point. The style is clear and the subject-matter excellent, and the book is an excellent one for both the laity and the profession.

THE AIR AND VENTILATION OF SUB-WAYS. By George A. Soper, Ph.D. Member American Society of Civil Engineers, American Chemical Society, Society of American Bacteriologists, American Public Health Association. 12mo, ix—244 pages, 43 Figures. Cloth, \$2.50 (10/6 net). New York: John Wiley & Sons. London: Chapman & Hall, Limited. 1908. Cloth, 245 pages.

This volume is the outcome of studies carried on for two and one-half years for the Board of Rapid Transit Railroad Commissioners for the City of New York; and, after that board went out of existence, for the Interborough Rapid Transit Company, to whom the first New York subway is leased. The work was begun in the summer of 1905 and concluded in 1907.

At the conclusion of the investigations it seemed desirable to have some of these reports bound together for private circulation, but it was finally decided to put the work into somewhat more extended form and offer it to the general public.

Soper first considers the evolution of the modern subway, at home and abroad; discusses then the atmosphere of the open country and cities, and follows this by a description of the methods of ventilating subways. Then is considered the air of European subways, of the New York City subway and the health of the New York City subway employees.

He concludes that "the air of the subway, as judged by analyses and by careful studies of the health of the men, was not injurious," the most objectionable feature being the iron dust; the odor and heat being disagreeable but not actually injurious.

"Pleurisy occurred to the extent of 53 per cent. among the employees, and congestion and inflammation of the upper air passages was prevalent." The volume is a very readable presentation of an interesting subject.

PULMONARY TUBERCULOSIS AND ALL COMPLICATIONS. By Sherman G. Bonney, M. D., Professor of Medicine, Denver and Gross College of Medicine, Denver. Octavo of 778 pages, with 189 original illustrations, including 20 in colors and 60 X-ray photographs. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$7.00 net; Half Morocco, \$8.50 net. For sale by Flower Brothers, 543 S. Broadway.

Bonney has given to the Englishspeaking world, in this book of almost 800 pages on "Tuberculosis and its Complications," a valuable addition to the literature on this important disease.

To Californians the work is of special interest because it presents the view-point of one of Colorado's leading specialists who voices particularly the advantages of high altitude treatment.

The general typographical make-up and the illustrations, (of which there are 249) are good, the X-Ray photographs being especially clear. In the arrangement of the subject-matter, the author chose the form, no doubt, that seemed to him the best, and yet we believe a different typographical make-up would have made the contents somewhat clearer.

The volume is too large to permit of an extended criticism of individual chapters. The text dealing with physical diagnosis and the hygienic-dietetic methods of treatment is an excellent There is presentation of those topics. at times a tendency to lay stress on Colorado experiences, but then the author frankly states that he has written the book largely from the basis of his personal experiences. A criticism we would make of his discussion of the etiology of the disease is that after reviewing the causative factors in considerable detail, he fails to present clear. cut conclusions thereon.

Bonney's discussion of the symptomatology is good, and as stated, his review of diagnostic methods and technique is one of the strong features of the book. The space given to complications is much greater than is usually accorded to this portion of the subject, but the discussions thereon are valuable and add to the merit of the work.

Treatment is given careful consideration, likewise the various measures of prevention.

The work is a distinct credit to American medical literature, and will no doubt be eagerly welcomed by many practitioners who have been waiting for an extensive book on the subject of tuberculosis.

This is the second work to have come off the press recently that deals with this disease, the first book to appear being by Dr. F. M. Pottenger of Los Angeles. A third work is now in press and will come off under the editorship of Dr. A. C. Klebs of Chicago; Dr. W. Jarvis Barlow of Los Angeles, having contributed the chapters on Clinatology therein.

There cannot be too much attention given to this disease, and a special text-book dealing with the subject is worthy of a place on the book shelves of every American physician. It should be a source of gratification to Americans that these works brought out by Pottenger, Bonney, Klebs and others are of such excellent character and standards.

SYPHILIS DE LA MOELLE, par le professeur A. Gilbert et le Dr. G. Lion, medecin des hopitaux de Paris, 1 vol. in 16 de 96 pages. Cartonne: 1 fr. 50 (Actualites Medicales). Librairie J.-B. Bailliere et fils, 19, rue Hautefeuille, a Paris.

MM. Gilbert et Lion viennent de publier dans les *Actualités médicales* un remarquable exposé de l'intéressante question de la Syphilis de la Moelle. Voici le résumé des indications thérapeutiques qu'ils donnent.

La conduite à tenir en face d'un cas de myélite syphilitique varie avec la force de la maladie et le stade auquel elle est arrivée. Plus on sera rapproché du dédut, plus on aura de chance d'obtenir une action favorable. A la phase prodromique, la guérison peut etre considérée comme certaine. A la phase de paraplégie flasque, elle pourra encore etre obtenue dans certains cas. Il n'en est pas de meme à la phase de paraplégie spasmodique; la guérison n'est plus alors possible et le traitement mercuriel intensif pourrait meme etre nuisible.

Dès les premiers accidents, dans les formes à début brusque, à la phase prodromique ou quand les paralysies sont encore flasques dans les autres formes, il faut instituer un traitement intensif.

Pour l'administration du mercure, la voice buccale doit etre rejetée. Il faut employer les frictions ou les injections hydrargyriques. Les injections constituent le traitement de choix, surtout dans les cas de syphilis maligne cérébro spinale et dans les formes aigues. Certains syphiligraphes préconisent les injections de calomel en suspension dans l'huile de vaseline ou d'huile d'olive. D'autres donnent la préférence aux sels solubles.

L'iodure de potassium peut etre administré concuremment au mercure, à la dose de 4, 6 et 8 grammes, quelquefois plus. On arrive généralement à le faire tolérer par la voie buccale. On pourra, au besoin, le faire absorber par la voie rectale.

A la phase de paraplégie spasmodique, l'action du traitement specifique a été l'objet d'appréciations variables. Certains auteurs préconisent le traitement mercuriel intensif. D'autres, au contraire, se sont élevés contre l'abus du traitement mercuriel intensif dans la forme chronique de la syphilis médullaire. Au lieu du traitement intensif, il faut, à cette période, utiliser les injections de Panas d'huile au biiodure de mercure, à la dose quotidienne de 5 à 8 milligrammes. On peut encore administrer sans inconvénient les pilules

mercurielles ou le sirop de Gibert. L'iode en nature, soit à l'intérieur, soit en injections hypodermiques, sous forme de lipiodol, a une action favorable, à condition de s'en tenior aux doses modérées.

A côte du traitement spécifique prennent place un certain nombre de moyens ou adjuvants dont l'action peut etre utile.

A MANUAL OF DISEASES OF INFANTS AND CHILDREN. By John Ruhrah, M. D., Clincial Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore. Second Revised Edition, 12mo volume of 423 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Flexible leather, \$2.00 net.

This is good of its kind. It serves the student who is cramming for examination and the practitioner who desires to superficially refresh his memory. It is mechanically excellent.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S., late lecturer on Anatomy at St. George's Hospital London. New American edition, enlarged and thoroughly revised, by J. Chalmers Da Costa M.D., Professor of Surgery and Clinical Surgery, and Edward Anthony Spitzka, M.D., Professor of Anatomy in the Jefferson Medical College of Philadelphia. Imperial octavo, 1625 pages, with 1149 large and elaborate engravings. Price, with illustrations in colors, cloth, \$6.00, net; leather, \$7.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

For sale by Fowler Brothers, 543 South Broadway, Los Angeles. Each edition of this sacred volume spells perfection at the date of its issue. The brilliant Henry Gray may not have been inspired in the orthodox sense of the word but his work is certainly sacred. Sacred to half a century's service as the cornerstone of the professional education of nine tenths of the English speaking medical students in the world.

This new edition has been thoroughly revised, every page bearing alteration and improvement, and the whole section on the Nerve System has been rewritten in comformity with recent revolutionary changes in methods of approaching and viewing it.

Professor Spitzka, who has done this

section, has made the subject a special field of study, and to the qualifications of an anatomist of the first rank he adds the skill of an artist as well, so that his own hand conveys his knowledge directly to the eye of his reader. Professor Da Costa is both an anatomist

and surgeon, and the editorial combination therefore unites what is required for the revision of a work on this subject. The use of colors is another valuable aid initiated by "Gray," and it is developed even further than before in this new edition.

THERAPEUTICAL HINTS

Chologestin is strictly and exclusively an "ethical" prescription product and none of the objections urged against proprietary preparations can possibly be raised in the case of the product referred to. The advertising matter issued by the makers is dignified, conservative and devoid of exaggerated or misleading statements, and the preparation is not only distinctly efficient in its field (a digestive cholagogue), but meets every possible ethical requirement that can be fairly demanded by the most ultra-ethical physician. Samples and literature descriptive of Chologestin may be had from the manufacturers, F. H. Strong Co., 58 Warren street, New York.

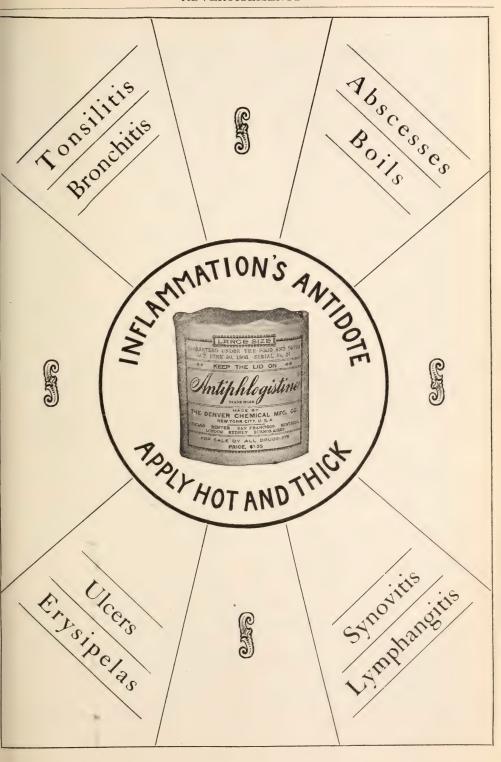
THE PRESENT PANDEMIC OF PLAGUE, by Assistant Surgeon-General J. M. Eager. Prepared by direction of Surgeon-General Walter Wyman, and just issued by the Public Health Marine Hospital Service, is the title of an historical and statistical brochure. Address a request to the Surgeon-General, Washington, if you desire a copy.

"The clergy live by our sins, the medical faculty by our diseases, and the law gentry by our misfortunes," is one of the sayings of Sir Walter Scott.

ELI LILLY, THIRD.—A man in line to play an important role in the pharmaceutical manufacturing field of the

United States is Eli Lilly, third, son of President J. K. Lilly of Eli Lilly & Co... The Lilly Company is distinctly a family concern and from the founder down it has been owned and controlled by men who have been pharmacists by education and occupation. Eli Lilly, third, grandson of Col. Eli Lilly who established the house, is first of the third generation of the family to become actively connected with the business. Mr. Lilly was born in Indianapolis and received his first schooling in the Indianapolis public schools. After finishing the grades he took one year's military training at Culver's Shortridge Academy: later entered High School, the classical department of Indianapolis high school system, from which he graduated in 1904. The following fall he matriculated for a three years' course at the Philadelphia College of Pharmacy, the alma mater of his father, from which institution he graduated in 1907.

Dancer.—The sufferers from the use of substitutes and cheap imitations of Glyco-Thymoline are the physician and patient in reputation and person respectively. The temporary gainer is the person who deceives you. Prescribe original package, (pound bottle.) The Local Treatment of Inflammation of the Upper Air Passages, by M. R. Dinkenspiel, M.D., ex-resident physician of the Philadelphia Hos-



pital. In all the simple acute inflammations of the upper air passages, such as pharyngitis, laryngitis, rhinitis, etc., especially when they are due to exposure, to cold or dampness, I have found the judicious employment of Glyco-Thymoline an excellent remedy and when the patient is seen at once, practically an abortive remedy.

Abscess.—Cleanse the region with sterilized water, wrap the wound in aseptic gauze steeped in pure Ecthol, and at the same time administer four teaspoonsful a day internally. Keep the dressing moist with Ecthol without removing it.

If the abscess has been lanced it should be syringed out with the same solution.

 R
 Ecthol
 3j

 Aqua distil
 5j

The sore should then be covered with lint saturated with the same solution. Administer internally half a teaspoonful every two hours.

THE LYMPH TREATMENT.—The American Animal Therapy Company has now established in Los Angeles A PACIFIC COAST BRANCH. Serum for professional hypodermic use and lymphaid compound in capsule form may now be obtained direct of the company's sole representative, WM. R. ELLISTON, 631 Laughlin Bldg., Phone Main 50.

Reliable observers have reported that the combination containing

Sulpho-Lythin12 grs. Hexamethylenamine ...3½ grs.

(Designated as "Tablet No. 6") is effective in doses of two tablets, administered twice or three times a day, according to the condition.

For the *internal* treatment of Myalgia Lumbalis Dr. Samuel Earp of Indianapolis uses:

Potassium bromidedr 3 Sodium salicylatedr. 3 Simple elixir, q. s. ad....oz. 2

M. Sig.—Teaspoonful every three to six hours.

Externally Dr. Earp frequently employs:

Hysteria is the expression of one form of nervous debility. Celerina is thus peculiarly indicated because of its tonic effect on the whole nervous system.

In women suffering from amenorrhoad due to deprivation and depressing hygienic surrounding, the late Dr. Goddell, of Philadelphia, placed great reliaance in the "Mixture of the Four Chlorides":

M. Sig. Dessertspoonful in water after meals.

Lutaud combats the pain of orchitis by the administration of cachets containing seven and one-half grains of guinine sulphate. In the majority of cases pain is arrested after the first dose, and it is unnecessary to give an injection of morphine. At the same time the following is applied locally:

daily.

Vol. XXIII.

Los Angeles, November, 1908.

No. 11.

DR. WALTER LINDLEY, Editor.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN, Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW,
Associate Editors,

VACCINES AND SERA.*

BY DR. ETHEL L. LEONARD, B.S., M.D., LOS ANGELES, CALIFORNIA, PROFESSOR OF BACTERI-OLOGY, COLLEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA.

Since the work of Wright in England, Hektoen in America, and Neufeld in Germany there has been a great amount of discussion concerning the value of vaccine treatment of various infectious diseases.

There seems to be such a variation in the statements of competent, scientific workers that one is at a loss to know just what to rely upon.

In the first place the treatment of various infections with culture products is not a new procedure by any means. Take for example the Pasteur treatment for hydrophobia. The infecting agent in this disease has never been isolated, but we know that in an animal dead of hydrophobia the toxic substance is found to be principally in the medulla. Long before modern bacteriological methods were known, Pasteur removed the medulla from rabbits dying of hydrophobia, attenuated the toxic substance by drying and made an emulsion from the medulla which was inoculated into patients bitten by rabid animals. The result of this treatment is well known and is practiced all over the world.

The Indians made use of this same principle. When a person had been bitten by a poisonous snake, they learned that if they could get a piece of muscle from the snake's body and bury it in the wound of the patient, that the poison did not exert its deadly effect and the one bitten would recover. Perhaps they did not offer the explanation which we would at the present time but we know that immunity was conferred on these patients by the use of a similar poison of less virulence.

The use of tuberculin for treatment has been persisted in by comparatively few scientists for many years and at the present time its use is wide spread and few of those who have had experience with this vaccine doubt its usefulness as a therapeutic agent.

There are very few physicians who doubt the value of the antitoxin for diphtheria, the antivenin for snake bite and the usefulness of antistreptococcus serum in certain infections, but the laboratory proof of the efficacy of attenuated culture products to produce immunity seems to be almost entirely

^{*}Written for the Practitioner.

overlooked. It is well recognized that many of the reported failures in treating a variety of cases with vaccines, has been due to the fact that "stock" or heterogenous vaccines have been the only kind available. We know that there are many different strains of the various pathogenic organisms, that the ability to produce toxin by one strain may be doubled by that of another and it seems to us that it is hardly fair to give too great credence to case reports where only heterogenous vaccines have been injected.

The true test of the practical value of this work should be based only on the administration of autogenous vaccines.

In those cases where autogenous vaccines have been used our work for the past year shows that in the most persistent cases of furunculosis, when all other forms of treatment have been useless, a few inoculations of the autogenous vaccine causes the furuncles to disappear. We have also found in the treatment of old sinuses that the autogenous vaccines are of great value especially when other methods of hyperaemia are used.

Autogenous vaccines for the treatment of secondary infections in pulmonary tuberculosis and for the treatment of local tubercular lesions are reported favorably upon by many physicians.

The use of the opsonic index as a guide to regulate the dosage in these cases is not always practical or necessary, since there are many clinical evidences that may be relied upon. The persistent zone of hyperaemia at the site of inoculation is an important guide and a dose is not repeated until this zone has disappeared. There are also local reactions about the lesions and evidence of healing in the lesions which is perhaps really more of an indication of recovery from the infection than a test of the blood serum would be.

The opsonic index is a valuable guide in many cases and in the hands of an experienced laboratory worker the results are clinically reliable, and may be of great help.

It would appear that the real test of the use of vaccines for chronic and sub-acute infections should be made only by the use of autogenous vaccines. Unless arrangements can be made for treating such infections with vaccines prepared from the specific infecting organism, it would only add to the existing confusion to report any cases which are treated by other than autogenous vaccines.

Auditorium Building.

SOME OBSERVATIONS ON THE OPSONIC TECHNIC.*

BY J. E. POTTENGER, A.B., M.D., MONROVIA, CALIFORNIA, CHIEF OF LABORATORY, POTTENGER SANATORIUM.

Although much work has been done since Wright first announced the opsonic index as a means of diagnosis and a guide to therapeutic inoculation, there is still a wide difference of opinion regarding its value. Notwithstanding the apparent simplicity of the principles upon which the technic is based, repeated control work will convince any worker how inaccurate his work may be. On the other hand, those of us who have had the oppor-

tunity to study with Professor Wright know that many of the difficulties of which many workers complain, are eliminated with strict adherence to the principles laid down, and care in execution of detail.

A few workers have concluded that the technic is so inaccurate as to hardly justify the time spent. This conclusion is not warranted in my experience. To ascertain this error I have made duplicate preparations with

^{*}Written for the Practitioner.

staphylococcus emulsion, putting up the duplicates in separate capillary pipettes. A series of 28 duplicates made on different days shows a range of error of 0% to 21%; in 16 of these the error was 7.7%. I consider such a result sufficiently accurate for practical purposes. In grouping my results into two groups, I find that the average error for the first 14 of the series was 9.1%, while of the last 14, 6.3%. Since the same number of leucocytes, 75-100, were counted throughout the series, I attribute the improvement to attention to detail. These counts were made under unknown labels, so as to remove all chance of bias in making the count.

As a guide to inoculation, however, the index has seemed in some instances useless. The interpretation is usually easily made in local infections, and it is here that the phenomena of ebb, flow and reflow of the resisting power of the patient is best demonstrable after inoculation. These results briefly stated agree essentially with the work of others, and they should not discourage us, but only stimulate to research on the physiological chemistry of the subject and a more critical study of the technic; for it is entirely possible that the technic as at present performed is adequate to the comparatively simple condition of a local infection, but lacking in certain principles which are to make it of universal application. With this attitude I present the following review of the technic based on the power of serum to prepare organisms for phagocytosis.

EMULSION OF ORGANISMS. We are directed in general to take a growth of organisms against which we are testing, break up lumps mechanically, centrifuge the remaining clumps and remove the supernatent emulsion of organisms. Undoubtedly much error intrudes if the emulsion is im-

perfectly homogenized. Impressed with this fact I have from the first employed a shaking apparatus run by motor, making an excursion of 4 inches and 300 vibrations per minute. Clumps are in this way completely broken up in 5 to 10 minutes. If small quantity of emulsion only is available, the device (1) which I have previously described, is very effective.

It is now known that a normal serum is able to sensitize many more organisms than are usually contained in a volume of emulsion such as is used. hence the relation which various strengths of emulsion bears to the corresponding indices is important. What principle should guide us in the selection of a proper emulsion, as regards number of organisms present? Walker (2) has called attention to the fact that the combining power of normal serum with an emulsion is so great that the leucocytes are completely filled and accurate computation is impossible. He produces good reason for the conclusion that in the use of such dilute emulsions as are usually employed for this purpose, there must be considerable error.

SERUM. The early workers have shown very satisfactorily that the serum is the chief variable in the phagocytic equation, and Wright considered this the only element the power of which is worth computing.

Corpuscies. Wright found that the leucocytes did not vary greatly in their ability to take up opsonized bacteria and he ignored them in the development of his technic. Fleming (3) says, "It does not seem to affect the opsonic index, whether corpuscles were used from a healthy or an infected person." On the contrary, Bulloch and Ledingham (4) have shown that corpuscles from a talianine-leucocytosis give a reduced phagocytosis. Potter and Krunwiede (5) and later Fleming (3) ob-

serve the same diminution in acute pneumonia. Fleming observes also that phagocytosis varies inversely with the number of leucocytes in the respective mixtures.

Wolf (6) called attention to the fact that while the opsonic index may be low, the phagocytic power per volume of blood may be high.

It seems highly probable that Wright's original technic in so far as it disregards the leucocyte will be changed.

On the whole, the literature on this subject is far from satisfactory, and it would be interesting to know how much effort has been wasted for lack of sufficient knowledge of the physical

principles upon which the technic is based.

In conclusion, I am of the opinion that the technic as at present will require important modification before it becomes of extended and accurate application. In the meantime there seems to be good reason to continue it in the localized infection.

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THE OPSONIC INDEX—A TECHNIQUE UTILIZING THE ORDINARY INCUBATOR.*

BY GEORGE H. KRESS, B.S., M.D., LOS ANGELES, CALIFORNIA, PROFESSOR OF HYGIENE, COLLEGE OF MEDICINE, UNIVERSITY OF SOUTHERN CALIFORNIA.

The technique for obtaining the opsonic index as most often described implies generally the use of a specially constructed incubator that is of little value for other work. It was the writer's privilege to recently spend some time at the Memorial Institute for Infectious Diseases at Chicago. Illinois, and through the courtesy of Professor Ludvig Hektoen and his coworkers, Drs. Ruth Tunicliff and E. C. Rosenow, he had the opportunity of observing the modification of the Leishman-Wright method, which has been developed in the laboratories at Chicago. One of its distinguishing features lies in the fact that it permits the use of any ordinary incubator, and that the glassware used is of the simplest character. The various steps in the procedure of obtaining the index are furthermore easily understood.

The simplicity of the method and of the apparatus used should make the technique about to be described, of interest.

For the sake of clearness, it may be permissible to repeat that the opsonic index (a figure expressing a ratio) is based on the counts made in a prior determination of the phagocytic power of the leucocytes of the blood

This ratio of the phagocytic power is called the "opsonic index," the adjective "opsonic" serving to indicate the influence exerted by those substances in the serum, which cause the phagocytic power of the leucocytes of the sick person to vary more or less from the normal. These substances in the serum, the exact constitution of which is still unknown, have been called opsonins, from the Greek roots meaning "I prepare food for," i.e., because the serum constitutents known as opsonins, act on the bacteria in such manner as to cause a variation in their susceptibility

^{*}Written for the May, 1908, Practitioner.

to the phagocytic activity of the leucocytes.

This brief paper will not consider the elaboration of vaccines, but will confine itself, as already noted, to the technique of making the opsonic index, in so far as the method under discussion varies from the usual line of procedure.

In making the index, it is necessary to have at hand: one, some serum (both from the sick person and from a healthy person or persons); two, some leucocytes (those from a healthy person will do); and three, a suspension of the dead bacterium concerning which it is desired to obtain the opsonic index.

The method aims: one, to place the serum of a healthy person, some leucocytes and some bacterial suspension under conditions favorable to phagocytic activity; two, to do the same with the serum of the sick person, some leucocytes and some of the bacterial suspension; and then to determine the ratio existing between the first or normal or unit phagocytic activity and the second or abnormal or sick person's phagocytic activity. This ratio or index so obtained of the phagocytic power of the leucocytes, which in turn depends upon the amount of opsonins present. gives a more or less variable or correct estimate of the resisting power of the individual and in certain instances, is used as a guide in therapeutic practice for the dosage or amount of vaccines or bacterins (which are usually suspensions of the dead bacteria under investigation, that can be injected subcutaneously into the sick person's tissues for the purpose of stimulating the formation of anti-bodies). In the interpretation of the figures obtained by these methods, the fact must not be lost sight of that nature's laboratory in the human body, presents an environment somewhat different than that found in glass tubes and incubators. Further, that in making "the count" of the bacteria ingested, the personal equation of

the observer must be reckoned with. But even so, the Wright method and its various modifications are real advances in the calculation of the resisting power of individuals and of immunity. The large amount of work being carried on should in a few years give opsonotherapy its real place in medicine. What that place is to be still remains to be seen.

Taking up now the technique of obtaining the index, the *preparation of the leucocytes* will be first considered:

Into an ordinary glass centrifuge tube is poured a one per cent, sodium citrate solution in normal saline. From the punctured finger or ear lobe of the healthy person, a sufficient amount of blood (about six drops) is allowed to drop, so that when gently mixed, the solution becomes bright red. tube is then balanced and centrifuged with its partner tube filled to the right height with water until the leucocytes show as a white cream over the sedimented red blood corpuscles. sodium citrate solution is then gently poured off (using a long straight pipette with a fine end to draw off the last few drops of solution). The tube is then filled to about its previous height with normal saline solution and centrifuged as before. Again the saline solution is drawn off; the mouth of the tube being then plugged with cotton and carefully set aside until the serum is prepared.

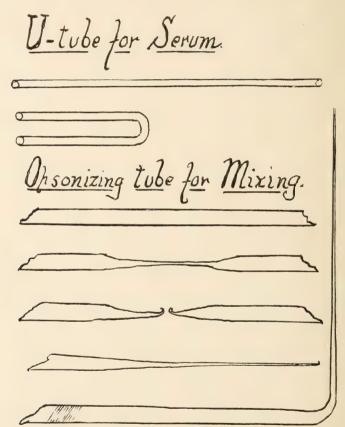
Concerning the Preparation of the Serum:—In the Memorial Institute method, if it may be so called, the blood from which the serum is to be obtained is not gathered in the usual "blood pipettes" but in little U-shaped tubes. (These are made from glass tubing having a diameter of about three mm. The tubing is cut into lengths of about three inches, and the center point of each such piece is then held in a Bunsen flame and the glass bent into a little U-tube. See diagram.)

The lobe of the ear is pricked (V.

Mueller, an instrument maker of Chicago, makes an admirable little lance for this purpose) and one end of the little U-tube is held to the oozing blood (it is best to hold the limb of the U-tube horizontally) and by capillary attraction, the limb of the tube fills with blood. Several such tubes may be pre-

out of the centrifuge and pushed end down into a sand bath. If serum of patient cannot be used the same day, the ends may be plugged with sealing wax as in transportation.

The bacterial suspension having been previously prepared, it is now possible to proceed with putting up the test, i. e.,



pared, both from healthy and from sick person, the tubes being marked with blue pencil for identification.

These tubes are placed in the centrifuge tubes, and are centrifuged until the serum separates as a clear layer above the corpuscles (in case the corpuscles sediment above the serum, use a glass capillary tube to break up the mass and centrifuge again).

The little U-tubes can then be taken

with the mixing of the serum, leucocytes and bacteria for the incubator, so as to allow the leucocytes an opportunity for phagocytic activity similar, as far as possible, to that in the body.

The opsonizing pipettes or tubes used at Chicago for this purpose are made from glass tubing of diameter of about five mm., which is cut into pieces of about six inches long (the ends plugged with cotton). Each piece is heated at its midpoint and drawn out into a capillary portion of about six inches length, the capillary portion being subsequently molten through at its midpoint, so as to produce two capillary tubes. See diagram.

When about to be used these straight capillary tubes are bent into L-shaped tubes, and the sealed end of the capillary portion broken off.

Two watch crystals are now taken and into one of these, by means of a straight capillary tube or pipette, the leucocytic cream is blown, after being drawn off from the centrifuge tube. With another capillary tube, some of the bacterial suspension to be used is blown out on the second watch crystal.

One of the right angled opsonizing tubes or pipettes is now taken and its capillary end gently thrust into the serum portion of the U-tube containing the patient's blood, and the serum allowed by capillary attraction to enter the capillary tube for an inch or so, the point where the serum ends being marked with a pencil. The large end of this tube is then placed in the mouth and a quarter inch of air drawn into the capillary end. The capillary tip is then dipped into the leucocytic cream (which is previously mixed on the watch crystal with an ordinary capillary pipette, if so desired), and the leucocytes are drawn up to the same height as the serum; then another air bubble is aspirated into the tube, being followed by the drawing in of the bacterial suspension to the proper level as indicated by the mark on the capillary tube.

The same procedure is gone through, using the healthy person's or "pool" serum with some of the leucocytic cream and some of the bacterial suspension.

One of the two L-shaped capillary tubes now contains leucocytes, bacteria and normal serum (normal opsonins) and the other contains leucocytes, bac-

teria and patient's serum (opsonins undetermined). These elements must, however, be brought into intimate contact if phagocytic action is to be carried on to best advantage. This is accomplished by drawing up the contents of the capillary portion of the tube into its elbow and then by gently blowing the mixture back and forth four or five times, finally leaving the mixture as one mass in the elbow of the tube. This procedure is gone through with each of the two tubes, and the mixture is then ready for the incubator.

The two L-shaped tubes with their contents are placed in an ordinary microscope slide or other convenient box, ends up, and put in an ordinary incubator having a blood temperature (37°C.) and allowed to remain there for about fifteen minutes, for phagocytosis, and are then taken out.

The mixtures are now ready for smears. For these, old slides or slides roughened with fine emery paper are preferred as there is less clumping on such slides.

The "normal smear" is made by taking the "normal" L-tube and blowing the mixture on the slide and then gently drawing it back and forth several times to insure a uniform mixture. A drop of this mixture is left at one end of the slide and a little square of cigarette paper is taken (of a width slightly less than that of the slide) and with finger or tweezers the paper is placed behind the drop of blood and the blood drawn toward the other end so forming a "smear."

The same process is followed in making the smear of the patient's mixture.

The smears so made are allowed to dry in the air and some carbol-thionin stain (to 192 c.c. of c. p. methyl alcohol add 8 c.c. of 95% carbolic acid, stir, and add one gram of thionin; filter) is then poured over the smear. The stain is allowed to remain a few moments and

then the slides are washed gently under the water tap and allowed to dry in the air. The slides so made are now ready for the count under the microscope.

The making of the count will not be considered here, the present article being merely written to present to the readers of THE PRACTITIONER a method which renders unnecessary the purchase of a special incubator and of glassware. Any error in description is the fault of the writer. The method itself has been so thoroughly tested at Chicago as to vouch for its reliability and value.

240 Bradbury Building.

"THE ROLE OF THE IMMUNISATOR IN MODERN MEDICINE."*

BY GEORGE MARTYN, M.D., LOS ANGELES, CALIFORNIA.

I am deeply sensible of the honor, you have done me tonight in asking me to address you, and I propose reviewing with you the changes that are revolutionizing the art we love so well.

Metchnikoff, in his studies in inflammation, laid it down as an axiom that in both the vertebrate and invertebrate kingdom, injury to the tissues coincident with the lodgement of a foreign body, or bacteria in those tissues, is responded to immediately by a rush of phagocytes to the injured part, and he regarded the phagocytes as the only antibacterial agents-in them lay the whole defensive power of the organism, but great scientist as he was, he overlooked the part the blood fluid plays. At the risk of being tedious I want to make these pathological facts clear, for the whole science of immunity rests on them. Wright and Douglas have since conclusively shown that the fluid part of the blood transuding with the phagocytes contain the antibacterial agents, the two best known being the opsonins and agglutins. It is a dual action-transfer of wandering phagocytes and a transfer of antibacterial fluid from the blood vessels to the injured tissue, the success of the one being dependent on the amount and presence of the other. In the blood stream the organism has all its defensive forces at hand; it has the bacteriotropic substances in the plasma, and almost all its phagocyting leucocytes-well named "the policeman of the body"-so that when bacterial invasion comes through the blood current, it is met at once by all the forces at the organism's command, viz: a superabundance of phagocytes and bacteriotropic substances. This does not hold good in the tissues, for the intruders will be met by only a few wandering phagocytes and an equally small amount of lymph, carrying antibacterial substances.

A consideration of this will at once make it clear to you why localized infections are so frequent and persistent, vet rarely leading to a general septicemia. On the clear understanding of this depends all treatment, for we see at once that success will be measured by our power to bring the conditions in that infected tissue up to the level of the circulating blood. Taking the successful establishment of a colony of bacteria in a tissue, it will be profitable for us to enquire into the agencies which have been helpful to it in obtaining that lodgment-where the machinery of immunity has broken down?

You will realize that the effective access to the local infection, of phago-

^{*}Read before the Riverside County Medical Society, June 8th.

cytes and bacteriotropic substances must have been interfered with in some of the following ways, which Wright so admirably summarizes:

- (I.) A defective blood supply to the seat of infection.
- (2.) A hypercoagulable and hyperviscid condition of the blood—this would impede transudation of fluid from the blood vesels and would be favorable to the coagulation of effused lymph in the tissue spaces.
- (3.) An accumulation of excessive fluid in the focus—this would prevent the phagocytes coming in contact with the bacteria.
- (4.) A blocking of the tissue spaces by accumulated and coagulated lymph—this would constitute a mechanical hindrance to the entrance of fluids and phagocytes into the focus of infection.
- (5.) A stagnation of lymph in the tissue spaces—this would lead to a gradual reduction of the antibacterial potency of the lymph which would render the phagocytes ineffective in as much as an accumulation of bacterial toxins and tryptic ferment would paralyze the phagocytes. Nature's attempt at immunity is inflammation, and when she fails, one of the above causes has operated to her undoing.

The therapeutic measures by which we can aid are:

- (1.) Raising the hydrostatic pressure in the capillaries of the affected tissue by heat and then damming back the venous return by elastic bandages, as in Bier's method.
- (2.) Diminishing the coagulability and viscidity of the blood by citric acid.
- (3.) Evacuating or opening the way for the entrance of antibacterial substances, whether it be by incision, aspiration or cupping.

Having briefly glanced at the science of immunity, let us pass to the practical lessons. Medicine owes no greater debt to any of her votaries than to Wright and Douglas; they have rescued her from Empiricism, stirring the dry leaves of usage with the breath of a new life-wonderful in its results, exact in its sciences, and yet we are only on the threshold of the full usefulness of Bacterine Therapy. Little or nothing has been done on the bacterial infections of the mucous membranesendometritis and bronchitis are almost unstudied, and we cannot doubt that a large number of disorders at present not connected with bacterial origin, are nevertheless directly caused by such. Today this much is proved—bacterine therapy is applicable not only to localized infections, but also to septicaemic diseases.

Any one who has read the illuminating "Studies in Immunity" by Ehrlick, will realize how the machinery of immunity in an organism is set in motion at once bacteria gain entrance to any tissue. The leucocytes, with the help of the protective substances normally in the serum, ingest them and in doing so release fresh supplies of protective substances. This holds good whether the bacteria be dead or living; it requires little thought to see what an immense gainer the body is if the dead can be utilized thus to destroy the living. This is the immunizator's role.

A bacterial vaccine, or bacterine as I prefer to call it, is a suspension of dead organisms in salt and glycerine in known proportions, both as to the number of organisms per c. c. and quantity of dilutants.

It will occur at once to you that the power of the bacterines for good or ill must be immense; on the one hand a proper dose given at a proper time must and does infallibly produce a surplus of protecting substances to the organisms it is composed of; at the same time, an overdose may use up en-

tirely the normal protective substances, leaving the living to increase and run riot. I have dwelt very fully with this aspect in a previous communication. When we consider that all organisms vary in virulence as their culture media vary, and that different members of the same family show greater or less virulence in culture, we cannot wonder that results even in apparently parallel cases clinically, vary so much with different bacterines. This is most clearly seen in the pneumococcus-strains differ immensely in virulence and lose their power very rapidly in subcultures; again the technique of manufacture must often vary; the slightest carelessness entails disappointment. In sterilizing even the difference of a degree may spell brilliant success or failure. Again, an immense difficulty presents itself when we are asked to predict the effect of a bacterine, owing to the different effect the same bacterine will have in the case of slight or great infection. These considerations will show you the immensity of the work yet to be done, but I can see no hope of any standardization of bacterines that shall approach to full usefulness. This leads me to the most important cause of variation in action, viz: the varying, resisting power of different patients to the same organisms; the devitalizing effects of secondary diseases in one person and not in the other. Take for instance Syphilis & T. B. You are all cognizant of the serious complication this is, and yet the same dose of the same bacterine may be given, in the one with little or no improvement, in the other with complete success.

We have two means of judging the effect of bacterines; whether it be for good or ill, viz:

- (1.) By clinical symptoms.
- (2.) By the index.

It will be profitable for us to consider how far either or both are re-

liable; how far we can dispense with them, and if so, in what particular class of cases.

Let me put it to you as Wright himself does. There are four different classes of cases clinically:

- (I.) The case of a localized infection; the clinical observer can immediately either see for himself or learn of every change which occurs in its condition—such as acne.
- (2.) The case of a localized infection where the conditions are unfavorable to the observation of changes in its condition—such as phthisis.
- (3.) The case of an acute febrile condition—such as septicaemia.
- (4.) The case where all local and general symptoms are in abeyance—such as a tubercular joint.

When we speak of clinical symptoms, first and foremost must stand the local changes-increase or decrease of pain; redness and swelling which are easy to see in such cases as acne and localized skin infections. Another class of cases, viz: discharging sinus, also enable us to judge of local changes by clinical symptoms, improvement being heralded by lessening of pain and discharge. In Cystitis due to bacilluria, microscopical and cultural examination of the urine will give the necessary data of improvement or retrogression. In acute febrile conditions, the temperature record is our guide and stay. If by an excessive or too frequent dose of bacterine we have lowered the amount of protective substances in the blood current, the living organisms can multiply, either they or their toxins when gaining the blood stream produce a raise of temperature which corresponds to the socalled negative phase. In immunization this is a danger signal, but you will see on consideration that this, the greatest guide of all may be illusionary, for this rise or maintenance of temperature may be due to a secondary infection grafted on to the primary one; taking a mixed infection, such as Coli and Staph, in a discharging abdominal sinus, or lupus and streptococci, and wherever two or more species of micro-organisms are treated by vaccine whilst one may be successfully combated, the other may be flourishing. This condition will hold good in either localized or general infections, so that the temperature curve as a clinical guide may be fallacious. On the same count the changes in localized superficial infections may be equally erroneous and if clinical symptoms can lead us so astray in these comparatively quick-growing infections, how much more so may they in such a slow involvement as Pulmonary Phthisis; here the mixed infections may absolutely produce disaster in their bewildering clinical symptoms. In no field are the clinical signs so useless or misguiding; clinical symptoms will be too late; the processes here are slow, so certain of ill, and from their very anatomical position so impossible to watch that one cannot from day to day, or even month to month, watch their progress or regress. Even supposing we discover after a very long sequence of injections that the dosage was suitable to the case, vet what certainty is there that the local conditions are the same and that such dosage is still appropriate? Only after another like period can we determine if it is so, and then again the same doubt. Take the reverse-supposing we find after a series of innoculations that positive harm has accrued, what help have we to fix the source of our error; or again, supposing we find the local focus of disease is unaltered, what feasible guide have we in clinical symptoms to determine whether some of our innoculations have been helpful whilst others have been absolutely harmful, or have they all been simply ineffective? This class of case presents these dominating questions to the truly scientific enquirer, and to such a one, clinical symptoms at once appeal as fallacious; the reckoning only comes to us at long intervals and never itemized. It will be the part of a prudent man to enquire for himself to find out from time to time how the account stands.

The temperature curve will not be an infallible guide to immunization, for although it is a measure of intoxication, yet excessive intoxication may cause a fall in temperature. As a general rule we may take it that a diminution of protective substance in the blood leads to increased growth of microbes in the organism, this to increased intoxication and so to rise of temperature—the converse likewise holding good.

Let us try to sum up the value of clinical symptoms as a means of correcting and controlling the dosage of the bacterines, and in doing so I will quote you Sir A. Wright's own words, no clearer exposition of our position do I know. He says: "Let me now try to sum up to you very briefly the main conclusions which have been reached in our inquiry as to how far and in what kind of a case the clinical symptoms enable us to correct and control the dosage of our bacterines. I may, perhaps with advantage discard the vocabulary of science for the vocabulary of metaphor.

"(1.) Where it is a question only of a short passage, or, as the case may be, of a succession of short passages, with landmarks continuously in view, over familiar waters where, while stranding is not out of the question, serious shipwreck is unthinkable, it would be ridiculous to insist that the pilot should keep the lead going and should set his course by compass readings. On the other hand, even here, if, as often happens, the landscape becomes indistinct, or is temporarily obliterated, the only rational alternative to anchoring and waiting for the reappearance of the landmarks would be to proceed by compass readings and by the lead.

"(2.) Where it is a question of protracted voyage during which no sequence of guiding landmarks could be expected to come into sight, it is desirable that compass readings should be taken every time that the ship is put upon a new course, or, if that should be impossible, always at the very first warning of impending danger. For otherwise the vessel might very easily zigzag about to no purpose, or she might, if the error in shaping her course happened to be a cumulative one, go very far out of the right track and come to serious disaster.

"And we must here beware of thinking that the possibility of error in connection with the laying off of the ship's course is the only possibility of error which we have to take into consideration. There are cases in which the ship may be flung violently off her course by the buffeting of winds and seas. And there are cases where, under some bias of wind or current, the ship may come off her course in a perfectly insensible manner. She may then easily run on the rocks if we do not lay out our bearings by the help of the compass.

"(3) Where it is a question of navigating through specially perilous and uncharted waters, where a wrong turn of the helm might at any moment bring disaster, he would be a very imprudent and reckless seaman who would dispense with the aid of lead or compass, even when there were landmarks in sight. Continuous soundings might here quite well give us timely warning of dangers, of which, even with a good lookout, we might be unaware until we had already run in amongst them. Nor would the prudent seaman discard

compass and lead until the vessel had come safely into harbor, or until, as the case might be, all efforts to save the ship had been abandoned.

"My metaphor will have accomplished its purpose if it has brought home to you that, while we can in many cases conduct our immunizations aright by relying on the experience gained in the past, and upon clinical observation, there are whole classes of cases—these being cases where the only hope for the patient is to be found in the proper conduct of immunization procedures—where the clinical symptoms cannot be trusted to furnish the necessary guidance.

"If this is so, it will be well for us to consider how it has come about that the clinical symptoms have been proclaimed to be an all-sufficient guide. I suggest that the explanation of this is to be found, not in any doubt as to the reality of the risks which might be incurred by the administration of excessive doses of bacterine, but in the persuasion that, if only the glaring errors which were committed in connection with the original inoculations of Koch's tuberculin are avoided, the results of bacterine therapy will be, on the whole, satisfactory. Associated with this is, I submit, also the further persuasion that where failures occur the responsibility for these need not necessarily rest with the immunizator, and that such responsibility can at any rate never be brought home to him.

"I see nothing to censure in this attitude. It is clearly an attitude which conforms in every point to the accepted code of medical ethics. But, at the same time, I cannot conceal from myself that in every other department of practical life—let us think, for instance, of shipping or railways or any engineering industry—a much higher standard of responsibility is enforced. It is only in connection with medicine

that the expert is content to attain an average of satisfactory results; it is only in medicine that he thinks efforts to secure uniform success uncalled for; and it is only in medicine that he contends that he has at disposal all the information he requires for his guidance, when a moment's consideration would make it clear to him that he is taking risks, and is proceeding in the dark.

"I make no doubt that this will not go on forever, and that the higher standard of responsibility, which is enforced everywhere else in civilized life, will be enforced also in medicine. It will be enforced then, when we shall have shaped it into something more like a scientific profession."

And so we come to the critical question-is the index our only reliable guide at present? I think so. It is the only scientific guide we havelaborious and requiring great technical training as it does, yet there is no other way. No scientific advance has been so fiercely questioned and yet it speaks volumes for our profession that many of the greatest intellects in it are seeking to simplify and improve rather than destroy its usefulness. If any light has been thrown on the machinery of immunization in man, it is through it. If it has been possible to substitute for the excessive doses of tuberculin originally given so often spelling disaster, the maximum dose consistent with benefit, it has been through it; nay, the whole Genesis of bacterial vaccines or bacterines began with it and through it and I am convinced that if we would pursue the height of our calling-the sacredness of life, and our patient's well being demand its use.

A serum is the blood serum of an animal whose resistance has been greatly raised by frequent injections of small doses of the infecting organism, so that a serum contains antitoxins manufactured by the animal and its action can only be a neutralizing one. So much antitoxin will neutralize so much toxin; any action beyond this must be due to dead micro-organisms in the serum; which then act as a very weak bacterial vaccine. You will appreciate from this how little of real service there can be; there is one exception, diphtheria. In this disease there is a limited growth of the micro-organism, but its destructive power is immense, owing to the toxins which are poured into the system. A bacterine, consisting, as it does, of bacterial protoplasm in suspension, on the other hand, when injected into the tissues, is immediately pounced on by the leucocytes and ingested with varying rapidity, according to the amount of opsonins present. The opsonins rapidly increase as the ingestion proceeds, the general blood current becoming more and more saturated with them. The result can never be in doubt, as infected tissues, living or dead, must be bathed in this self same blood; the same fate o'ercomes the living invading organisms as the dead injected ones-the curve of immunity rising rapidly.

Immunity means that an individual has a sufficient quantity of antibacterial substances in his blood to kill off the invader, and so prevent it colonizing in him. If a colony is formed, the destruction of some of the invading hosts will increase the supply of antibacterial substances; this is known as autoinoculation; witness the pneumonic crisis. Pneumonia becomes then really the last line of defense in nature's fight to establish immunity to the pneumococcus, the first being the nasal and buccal cavity; the second, the bronchi, both large and small; this is the most vulnerable, as the lining epithelial cells are nonphagocytic; they are ciliated and organisms find it hard to pass these ciliae, but once passed and entrenched in the alveoli of the lungs; the whole power of the body is massed on them-an abundant blood supply charged and recharged by every slain pneumococcus with more pneumococcic opsonins; the leucoytes of the blood and the alveolar epithelium, both powerfully phagocytic-it is here the supremely vital effort is made and as the supply of opsonins increases, the great strategist, nature, becomes more active, the deciding moment—the crisis -draws nigh-watch in your mind's eve the battle, and as the ever rising flood of the lymph laden with opsonins arrive, a time comes when the supply o'ertops the demand, the fight dies down, the life is saved, the crisis is over-a wreck after the storm it may be, but victorious. Seeing this as I do, may I suggest that if any drugs are displayed digitalis should not be, for its most important action is to constrict the arterioles, the highway along which improvements must come-rather should we open the flood gates and let every drop of lifegiving blood into the stagnant battle field. Nitro-glycerine will do this and following this I have seen the greatest benefit from its use. If the picture of pneumonia be as I conceive it, the injection of a small, very small, quantity of sterile pneumococci into a healty part of the body must infallibly help in the struggle, as the opsonins formed at the seat of injection will be carried to the area of infection, and it is conceivable that they might just turn the scale of victory. To some infections immunity is lasting, as in small pox. No one who knows aught of the modern science of immunity can now doubt the necessitythe harmlessness-if done under antiseptic precautions—of this procedure. I am not concerned with the public-I am addressing scientific men-men to whom the public rightly looks for guidance. If vaccination is wrong, then the whole structure of immunity must go-the master minds of science must be dotards —bacterine therapy has no foundation

in fact-this, gentlemen, is logical-the promise is inevitable. Pox vaccine is a suspension of micro-organisms in glycerinated serum—the ingestion of these by the leucocytes in vaccination produces a superabundance of opsonins as protective substances to small pox and the immunity is long lived. Would that others were equally so. It is one of the problems of the future—the causes of the varying length of immunity conferred by various bacterines. In others again immunity is very short lived, as in tuberculosis. It is then reasonable to suppose that the introduction of an appropriate number of dead bacteria in the form of a bacterine may just turn the scale and will produce the necessary reinforcement of the defending forces to insure a victory over the invading hordes; nay, more, it may turn a local defeat into a route as each invader destroyed becomes a potential defender, thus the crisis in pneumonia and the causation is clear. It has been my lot to treat a very large and varied number of bacterial diseases, both general and local by homologous bacterines. The commonest and at the same time the easiest to combat, are the straphylococcal infections. They are liable to be met with in any secondary infection, but more especially in skin diseases, such as acne, and in passing I would urge the immunizator not to be content with the use of his bacterine. Of equal importance is it to get the lymph through the indurated patches and soften the suruse is it to raise the protective power of the blood if you cannot get that blood rounding inflammatory areas. Of what to the nidus of infection? Stagnant lymph is fast robbed of its protective substances and the leucocytes—the policemen of the body-are first paralyzed by the toxic products of the invading bacteria and finally disintegrate, forming a tryptic ferment during the process of decay which eats into the surrounding tissue forming the abscess

or pus cavity, so that an evacuation of the cavity and transfusion of fresh lymph is the key to successful work.

I know of no class of cases illustrating so clearly the dire results of mixed infection and the gradually sinking curve of immunity as the various forms of tubercular disease of the spinal column, more familiarly known as "Potts" disease-complicated as it it with the inaccessibility of the original diseased focus. These cases, when drained, present numberless chronic sinuses with thickened walls devoid of all attemps at capillary growth, lymph sodden, and what is worse, containing a lymph devoid in many cases of all antibacterial substances. What better illustration could we have of the very conditions we have been discussing; here nature's attempt at immunity is frustrated by the conditions—the health-bearing local blood cannot flush these thickened lymph coagulated walls; clearly it is here that the machinery of immunity has broken down; it is one of the cardinal axioms of immunization that it shall not suffice to increase the protective substances in the general blood, without the real seat of infection be accessible of this same blood current; search when you will in nature's laboratory—the role of the immunizator can never reach its full usefulness without he bears this law ever before him. These cases will tax his skill and patience to the utmost and, because of this very quality, I want to consider with you three cases I have had under my immediate care, for they show so clearly the causes of possible failure and the difficulties before us as immunizators. The first, a man of 27, had spent 18 months in a hospital, having the advantage of every care that skilled nursing and attendance can give. For the last 12 months he had been absolutely confined to a frame, never moving but on it. He had two discharging sinuses—one on each side just above the crest of the ilium, both dis-

charging very freely through drainage tubes. The dressings were changed four times a day; he was emaciating very rapidly and running a septic temperature. Those who saw him felt there was only one result before him, and he felt he was rapidly going down hill. I made several cultures from the discharge taken very carefully from the depths of the sinuses, finding invariably staphylococcus albus. His opsonic index was to T. B. .65. Staphylococcus .47. The issue seemed clear. I made a bacterine of staphylococcus albus and injected .0001 T. R. and two hundred million staph., raising his blood index at once to staph. 1.6 and T. B. to 1.3, but with little apparent improvement in the discharge. This injection produced great local tension and a rise of temperature. The index slowly dropped and at the end of a week I injected another two hundred million staph. The reaction this time and rise of index was not so marked and the discharge certainly decreased, but not to my satisfaction. I felt the work was right but somehow the immunizator was neglecting some cardinal rule. It then occurred to me to take the index of the lymph discharging from the sinus, of which there was plenty and enough simultaneously with the blood, following this idea out, found the index of the sinus lymph .78, the blood 1.6. The writing was clearwithout I could get the protective charged blood through into those sinuses, no immunity could be conferred. The next problem was-how could I stimulate those sinus walls and in my perplexity a new method of filling sinuses with Bismuth paste by Dr. E. G. Beck of Chicago, came to my aid. The bismuth paste, made of bismuth subnit and boiling vaseline, has two actions—one mechanical, for at the body temperature it solidifies and so keeps the walls of the sinus stretched; secondly the bismuth exhibits a radio chemical activity in its gradual absorption by the

body. If necessary, this paste can be made more solid by the addition of parafin in small quantities, although I, myself, have had no necessity to do this. I made the paste and three days after injecting .0002 T. R. and 300 m. staph... I filled up the sinuses with it (the three days interval was given so that the local reaction and swelling of the bacterine should subside before the tension of the bismuth paste was added thereto.) The drainage tubes were discarded and never replaced. An X-ray was taken at once and showed a very interesting condition. A series of sinuses and pockets ran along the lumbar vertebrae on the right side up to the first lumbar and continued into the groin below poupart's ligament, running along the crest of the right ilium, across and involving the body of the fourth lumbar was a large sinus connecting the right and left series of sinuses. The left did not extend upwards but formed a month ago-he has been filled with bismuth paste four times; each time in very markedly lessening quantities. The mixed injection of staph, bacterine a large pocket below poupart's ligament on the left side. From this dateand increasing dosages of T. R. tuberculin have been persevered with under the guide of the index and today, two months since treatment began, the discharge has practically ceased and what there is, is serous and blood-stained, showing capillary growth. He sleeps well, cannot get enough to eat-temperature about normal-is putting on flesh rapidly—and best of all is sitting out of doors most of the days without support, and I hope shortly to send him to the sea. I feel certain this patient will be restored to a useful life.

The other two similar cases—one a woman of 35, and the other a child, are doing equally well. I owe them an immense debt for these cases have taught me a priceless lesson in the science of immunity and the lessons

learnt have opened up an immense field of usefulness for us all in similar cases.

I have treated three cases of coli infection of the bladder and kidney, complicating tuberculosis and producing a very troublesome and persistent bacilluria of long standing. In each case the result has been eminently successful, the systitis clearing up. In one case of Dr. Edward's, a very successful nephrectomy was done by him after raising the patient's index to T. B. and Coli, and I am convinced that the scientific surgeon of the future will work along these lines. I would warn you that the coli bacterine is very variable in the resulting reactions. I have seen very intense reactions from small dosages, even as low as 5 million and a very prolonged negative phase, and so I regard this bacterine as criminal to use without the guide of the index. I have seen one case of commencing peritonitis following a ruptured appendix in a young girl yield at once to a bacterine of this organism and a filthy abdominal sinus discharging foecal matter change as if by magic to a clean healthy opening, rapidly closing with abundant granulations; a very interesting class of cases due to this organism is the class of cervical catarrhs associated with endometritis. These patients are generally sallow, unhealthy looking individuals, markedly anaemic: they usually improve after a menstrual period, owing to the autoinoculation consequent to that event, the index rising very markedly. Bacterines in very small doses in these cases produce very gratifying results if persisted in for a few months. Curetting gives great relief in such cases, because it produces a very marked autoinfection.

Finally I would draw your attention to a field little worked in as yet, viz: the infection of the respiratory tract. In no part of the body is there such a perfect arrangement of the essentials to immunity; here we have an abundant

blood supply with its countless lecucocytes, and more important still, an alveolar lining of epithelium cells, capable of carrying on phagocytosis of any stray organism. Normally the upper air passages are infested with micro-organisms but the body, by means of this very perfect immunizing apparatus of blood and cells, keeps the forces of destruction and repair evenly balanced. but if, from any cause the bodily tone is lowered, then the powers of destruction gain the upper hand and a "cold" is the result. I have had great success in several cases of distressing bronchial asthma, mostly due to the micrococcus catarrhalis. I have treated six cases, all of them the subjects of severe paroxysmal attacks daily or nightly of asthma, and it is wonderful the relief that can be obtained by appropriate bacterines. Two of these cases have been entirely cured; the others are greatly benefited; the distressing paroxyms lessening very markedly. One of these cases was especially interesting because of the age of the patient and unusual organism,-the patient, a child of thirteen, had repeated attacks of spasmodic asthma, so severe that she was unable to attend school regularly, attended with profuse expectoration. A culture of sputum gave many pyogenic organisms, amongst them staph, aureus, to which her index on three occasions was .65, .57, .73, to the others normal. I made a bacterine of staph, aureus and after the first injection the attacks decreased markedly. In six weeks she was entirely free with no return as far as I know.

In another case a lady over 45 was a martyr to paroxysmal asthma; every evening about five one of the attacks supervened; for years she had gone on, and as she expressed herself to me, so tired was she of life and these constant attacks that the desire to end it was becoming more and more persistent; being a medical man's wife, every known remedy was tried. I isolated the micrococus Cataribalis. Her index to which was .57 and I injected her with an homologous bacterine—the spasmodic attacks ceased after the first injection and she has steadily improved.

I could multiply these cases for you, each and every one having an interest of its own, each and every one meaning comfort and the joy of living to the patient.

If results such as these are given us, what greater fields must open in the difficult and dreaded secondary infections of the later stages of phthisis. For the last six months I have devoted my every energy to this branch of the work, and greatly beyond my hopes have the results been. I suggest that the high temperatures so often associated with the later stages of phthisis are not due to the toxaemia of the tubercle bacillus, but rather to the pyogenic secondary infections. Staphylococci, streptococci, pneumono or micrococci, whichever it may be. My work has impressed this on me more and more. I have cases under treatment that looked hopeless, and yet without any tuberculin I have been able, with the appropriate bacterine, to control the septic temperature slowly and surely, reducing it to the neighborhood of .99. Think what this means to your patient. It means freedom from the dreaded afternoon rise, increased appetite and general well being; nay further, I believe it means life in many, many cases.

A consideration which has always seemed to me pertinent is that lupus, when not complicated with secondary infection, has no abnormal temperature, vet tubercle are there—the toxins are there—and yet no temperature. Why because another organ is the seat of infection should the high temperature be ascribed to the tubercule and its toxins? In the future I shall have for the judgment of the profession a mass of cases, illustrating in their clinical features this contention. I have a letter from Dr.

Bardsley of the King's Sanatarium in England in which he says they also are working on these lines at that great institution, and they are convinced the hope of the future lies in this work.

My experience embraces every stage some have stood up again to take their places in life's struggle-many have regained comparative health. All are fired with the burning desire to live, and we, as medical men, know the joy that brings us. This work is in its infancy, but I am convinced I shall live to see the treatment of the distressing later stages of phthisis conducted on these lines. It is in these cases I have found the index of such supreme help in determining the organism which is pathogenic. Every day my faith in it increases. My own practice is to deal with the mixed infection first, and afterwards when the case become afebrile to use tuberculin, but never without the index. I cannot insist on this too strongly, for it seems to me criminal with our knowledge of its potentialities for good or harm to use it otherwise.

Gentlemen, our feet are planted on the rocks: I have only indicated to you tonight some of the considerations which must guide us as they appear to me; the time is past when we can speak of this work as "willow wisp." If it has saved any life; if it has brought comfort and ease where before there was the blackness of despair, then it is worthy of the best. This much is sure -this work has already changed the whole face of medicine; it is the link between medicine at one end and surgery at the other-it has come to stay. What of the future? We must be immunizators—"the physician of the future must be capable of making by bactereological tests a diagnosis of the nature of his patient's infection; further, he must be equal to making and standardizing special vaccines; he must be able to measure the output of protective substances by blood examinations to carry

out all this; our physician must be a trained laboratory worker, nothing less will suffice. But the physician will not be the only immunizator. Upon the general practitioner, when he shall have been trained in the physiology of immunization, as he is now trained in the physiology of the circulatory system, or the digestive system, will devolve take it, all such immunization as shall be possible to reduce to a system of routine, and all such immunization as can be effectively conducted under the control of the clinical symptoms. In addition to this there will, if I mistake not, devolve upon the general practitioner in association with the surgeon, all that department of immunization which consists in directing the protective agencies which are available in the patient's blood to the destruction of microbes in the local focus of infection. And in the future that I foresee the surgeon also will be, in a very real sense, an immunizator. He will, I doubt not, except in those rare cases where there is an isolated bacterial focus, and where the complete extirpation of that focus is practicable and advisable, direct all his operations in connection with bacterial diseases to the attainment of immunzation. I conceive, for instance, that when he carries his incision through infiltrated tissues, he will feel that his work remains incomplete until he has secured that free flow from his wounds which is essential to immunization. Again when he deals with a suppurating focus he will, I take it, concern himself not only with vaccination and effective drainage, but will realize that a combined suppuration without the achievement of immunization in a case which has been operated upon, is the reproach of surgery." And above all I conceive that the method of bringing the antibacterial substances into the blood stream will be improved day by day.

Fellow workers, it needs no prophetic

eye to see the future. Medicine will shake off the trammels of empiricism—will become less and less an art—more and more a science—this new work is at once a promise—full of new possibilities, and a peril if labor be spared—to the future. The striving to attain shall be the measure of our guerdon.

"We men, who in our morn of youth defied

The elements, must vanish;—be it so! Enough, if something from our hands have power

To live, and act, and serve the future hour;

And if, as toward the silent land we go, Through love, through hope, and faith's transcendent dower,

We feel that we are greater than we know."

THE EFFECT OF CLIMATIC CONDITIONS ON IMPORTANT SYMPTOMS IN TUBERCULOSIS.*

BY CHAS. C. BROWNING, M.D., MONROVIA, CALIFORNIA, MEDICAL DIRECTOR OF THE POTTENGER SANATORIUM.

The complex conditions which taken together constitute climate have long been recognized as having important bearing on certain diseases and their symptoms. In making this preliminary report of observations in regard to certain climatic conditions on tubercular patients the readings were taken from the record of the office of the U.S. Weather Bureau in Los Angeles, California. While most of the patients of under observation were being treated in the Pottenger Sanatorium at Monrovia, California, which is a short distance from Los Angeles, and while climatic conditions vary greatly in short distances in mountainous countries, and while there is actually considerable difference in climatic condition between the two points—yet, as the conditions are comparative I feel justified in using them because they are accessible and would be the same should others in that section desire to make comparative researches.

I have undertaken to show graphically on a chart the barometric pressure reduced to sea level, relative humidity, maximum and minimum temperature, precipitation, direction of wind, wind velocity and state of weather as regards cloudiness. In this report I shall

consider only barometric pressure and atmospheric temperature as furnishing indices to the complex of conditions, which appear to affect the only two symptoms which I shall consider at this time, viz, hemorrhage and bodily temperature.

The following is a summary of my observations:

Number of individual patients under observations noted in this report, 239.

Average daily number of patients under observations, 78.

Period of observation from January 1, 1907, to May 1, 1908, 486 days.

Number of patient days, 37.808.

Number of hemorrhages after patients came to Sanatorium, 77.

Number of individual patients who had heriorrhages, 33.

Number of patients who had hemorrhages after entering Sanatorium, 11.

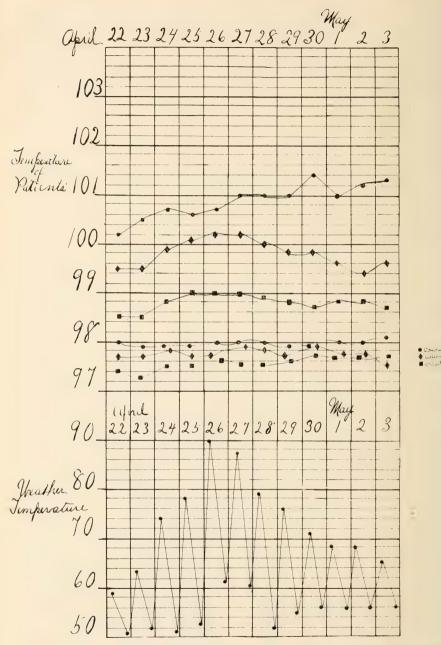
Number of patients who had more than one hemorrhage at the Sanatorium (2-11), 21.

One patient had 11, all slight.

Omitting these eleven, 55 hemorrhages occurred among 22 patients.

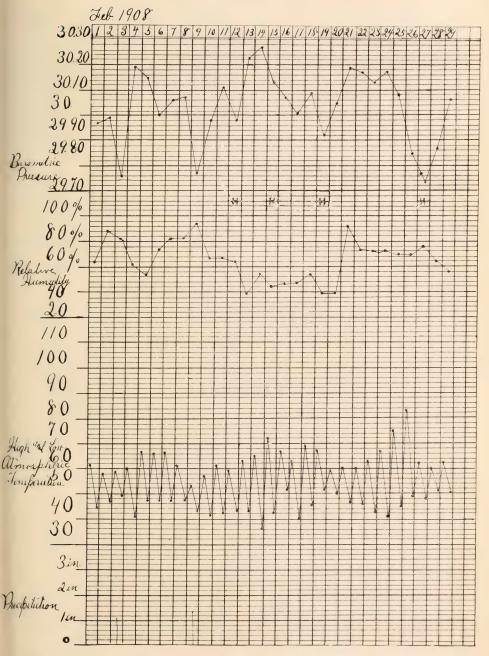
Classification of hemorrhage—slight, less than half ounce; moderate, one-half to 4 ounces; severe, 4 ounces and over.

^{*}Read before the American Climatological Association.



CUT 1—Lower portion, represents a period of 12 days in April-May, 1908, showing very high temperature.

Upper portion, shows average change of patients' temperature.



CUT 2-Month of February, illustrating chart of 14 months. "H" represents hemorrhage groups.

There were sixty-six days on which hemorrhages occurred.

For convenience of study I have grouped the hemorrhages so that I consider those occurring in less than 48 hours of each other as belonging to the same group.

Based on this the 77 hemorrhages occurred in 37 groups. Of the 37 groups 29 occurred during what I have considered excessive, relative, barometric change—more than ten one-hundredths of an inch before change in opposite direction. Seven groups occurred when relative barometric change was not excessive. Thirty-three (33) groups when barometric pressure was relatively low; 3 when relatively high; I medium.

Groups of hemorrhages occurring in but one person, 20.

Groups of hemorrhages occurring in two persons, 11.

Groups of hemorrhages occurring in three persons, 5.

Groups of hemorrhages occurring in four persons, I.

Average proportion of days on which hemorrhages occurred, about one to eight days.

I have undertaken to show graphictical conclusions at this time further than to suggest the advisability of keeping the patients with a known tendency to hemorrhage quiet during rapid changes of barometric pressure, and would suggest taking of the blood pressure at such times, as we have frequently found it high.

We have often noticed that extremes of temperature of weather have more

Low 55

or less influence on the temperature of the patients, and the conditions shown by the accompanying chart and the following table, have been of interest, and may suggest special care of patients with a tendency to rise of temperature during extremes of weather, especially high temperature.

The period of unusually high temperature for the season of year extending from April 26 to May 3 inchisive, gives from the highest temperature on April 22 of 58°, to the highest temperature on April 26 of 90°, making an extreme variation of highest temperature of 32°. In making these observations I have considered 93 cases and have given the average highest and low temperatures for each day. I have divided them into three classes, the first class being composed of 50 patients which I have denominated "quiescent" and are patients who do not ordinarily run over 90° as a maximum temperature. The highest temperature reported in this class of cases was 100°.

Class No. 2 includes all the active tubercular cases, or cases registering above 99° under ordinary conditions. There were 35 patients in this class.

Class 3 were cases that in addition to having active tubercular symptoms also had some other chronic complications which would increase their liability to rise of temperature.

The average rise in class I, during the extreme of the heated term, was 46-100 of a degree; of class 2, 66-100 of a degree; of class 3, I-26-100, as shown by days in the following table:

Extreme of Atmospheric Temperature.

	April 22	23	24	25	26	27	28	29	30
High						88	79 51	75 55	71 56
	May 1	2	3						
High	68	- 58	64						

Average high and low temperature of patients taken every two hours from 8 a.m. to 8 p.m.

45

CLASS I-QUIESCENT.

1908.	April 22nd	23rd	24th	25th	26th	27th	28th	29th	30th
1908.	May 1st	2nd	3rd						
			4 7	T 1					

CLASS II—ACTIVE.

1908	April 22nd	23rd	24th	25th	26th	27tlı	28th	29th	30th
	May 1st	2nd	3rd						
High		99.38 97.76	99.61 97.59						

CLASS III—COMPLICATED.

CLASS III—COMPLICATED.									
1908	April 22	end 23rd	24th	25th	26th	27th	28th	29th	30tlı
High Low	100	.20 100.47 .00 97.82	100.65 97.82	100.55	100.65	101.05	100.95	101.00	101.46 97.90
	May 1	st 2nd	3rd						

I am fully aware that these observations are not new, but hope that bringing them before you in this manner may be of some interest, and I trust to be able to follow these investigations farther; in fact I have at present another year of data, but it is not tabulated for use today. Of course it goes without saying that weather influence is of minor importance and can only be a contributing factor in the influence of symptoms.

The following observations reported by Dr. Byer in the *United States Medical Bulletin* of April, 1908, is of interest as showing the influence of exertion and superheated atmosphere in the well, and I take the liberty of quoting his observations:

"Kurita observed the temperature, pulse, and respiration in 28 men working in the fireroom and coal bunkers and in 6 men at work in the engineroom, on board H. M. S. Itsukushima, during one of her cruises in tropical waters. He noticed that the former showed a higher body temperature, a more rapid pulse rate, and a greater number of respirations than did the latter. The men in the fireroom did more muscular work and had to do it under a higher temperature than the men in the engine-room. The following table is a summary of these observations:

Ave	rage room	n Body t maximum n	Pulse	Respi- ration		
	°F.	°F.	°F.	°F.		
28 firemen		102.4	99	100.7	103	, 20
6 engine-room men	100.00	99.7	()()	99.35	89	_

Of the 28 firemen, 2 gave a temperature from 102.2° to 102.4°, 17 a temperature from 100.4° to 102.0°, 7 a temperature from 99.5° to 100.2°, and 2 a temperature from 99.0° to 99.3° F., while not a single one of the engineroom men gave a temperature above 99.7° F.

The rise in body temperature, in both groups of men, began thirty minutes after going on watch and reached its maximum during the last, or fourth hour. After the first hour's rest, in a room with a temperature varying from 75° to 85° F. the temperature of the firemen went down to an average of 99.5° F., and at the end of the second hour's rest it had reached 99° F.

Note.—I desire to express my thanks to Dr. Frank Neall Robinson and Dr. Marc Abrams of the medical staff of the Pottenger Sanatorium for valuable assistance in collecting data.

AN ILLUSTRATION OF A LOCALIZED TRAUMATIC LESION OF THE CORTEX.*

BY W. WARNER WATKINS, M.D., PHOENIX, ARIZONA.

The case upon which the remarks are based was a blow with a blunt pointed instrument,—just above and in front of the left ear.

The exercise of language depends on three cerebral centers. (1) Those which hold the mental image or conception in the consciousness of the existence of an object. These centers have never been localized. (2) Those which retain the Word Image—or the sensory speech centers. These are (a) that for the perception and memory of the sound of spoken words, which occupies the posterior part of the first and upper portion of the second temporal gyri; (b) that for the perception and memory of the appearance of written words, which occupies the angular and inferior parietal gyri. (3) Motor Speech Centers are,—(a) that which presides over the muscular actions of speech, which is in the third frontal gyrus; (b) that which presides over the muscular actions concerned in writing, which is in the posterior part of the second frontal.

In the case cited there was a partial

Aphemia,—more correctly, an Anarthria,—and a partial Agraphia with an incomplete facial monoplegia involving only the muscles of the lower face. So that there was probably an extravasation of blood along the Rolandic fissure, making linear pressure on the posterior margin of the first and second frontal gyri and on the lower extremity of the anterior margin of the ascending parietal convolution.

For this case it is perhaps the most logical course to scan first the symptoms as they were presented to me.

Pete Cannon, a mining prospector, age about 35, on the night of November 28th was struck on the left side of the head just above and in front of the ear by the point of a miner's pick. He came to Phoenix on December 3rd and was treated here until the 9th for the scalp wound. On the morning of the 9th he came to me, and almost the first observation made was that he had difficulty in speaking. On exploring the wound with an olivary pointed probe, the end of it slipped over a sharp bony edge just

^{*}Read before the Arizona Medical Association, April 28, 1908.

about in the situation of what is called the Pterion,—i. e., the junction of the four bones on the lateral aspect of the cranium; this I took to be a fracture at the junction of the coronal and squamous sutures.

Further examination showed a partial paralysis of the muscles of the lower face and tongue, of the opposite side. There was no abnormality of the pupil nor functional impairment in the muscles of the upper face.

The abnormalities in speech were discovered then and during the four days following. The patient would always unhesitatingly say "Yes" and "No" as occasion required, and could also easily enunciate the paradoxical statement,—"I can't talk." He preferred to confine his efforts to monosyllables, and if asked a question which required the formation of a sentence, he would not speak, but if it were put in such a shape that he could reply "Yes" or "No," he would immediately reply. At times he would formulate an entire sentence, but would always begin it haltingly and hesitatingly, saying the last words more rapidly and with a pronounced accent.

There were here, then, injuries to two distinct areas, and as a matter of diagnosis it was necessary to delimit these pressure areas.

First:-Pressure affecting speech.

Second:—Pressure causing the facial monoplegia.

As to the Speech:—As is well known, the exercise of language depends on three cerebral centers and the association tracts connecting them.

First:—The Psychical Centers. The perception of an object depends upon the evidence of its character derived through the sensations,—touch, sight, smell, hearing, taste and the muscular sense. And the retention of these coordinated impressions in the consciousness constitutes the MENTAL IMAGE of the object.

Second:-When the name of the ob-

ject has been heard and spoken, read and written, there are added the further memories of the sound of its name, the muscular actions involved in speaking the name, the appearance of the name written or printed, and the muscular actions involved in writing it;—the coordination of these in the consciousness constitute the WORD IMAGE.

The mental image and the word image must be distinguished. The Mental Image is the conception in the consciousness of the existence of any object. The centers whose function it is to retain this consciousness have never been localized.

But the centers for the World Image that is, the center which retains the appearance of objects as conveyed by visual impressions—and the center which retains the impressions of objects as conveyed by hearing their names spoken, have been definitely localized, and are called the SENSORY OR RECEPTIVE SPEECH CENTERS of the cortex. The one which has for its function the perception and memory of the sound of spoken words is located in the posterior part of the first and upper portion of the second Temporal Convolutions. The other whose function it is to retain the memory and perception of the appearance of written or printed words, lies in the angular and inferior parietal convolutions.

Third:—There distinct are two MOTOR SPEECH CENTERS. The center which by steady practice has become familiar with the series of muscular actions involved in uttering or speaking words, is located in the third frontal,-or Broca's,-convolution,-usually of the left side. The center for the movements concerned in writing words,-that is, which originates the muscular movements necessary for this purpose—is located in the posterior portion of the second frontal convolution.

In the injury mentioned, there was

no violation of the integrity of the mental image which must first exist before language can find expression. Wherever is located the center for the marshalling of thought in the effort to enunciate language, it was not involved, because the patient knew what he wanted to say or write, and it was only when effort was made to enlist the motor speech centers in the process, that he failed.

Nor were the sensory, receptive speech centers involved, for he always understood perfectly and instantly what was said to him and understood the meaning of what was laid before his eyes in writing or printing, though he would fail in the effort to read it aloud. This excludes the angular and parietal and temporal regions from suspicion of injury.

There WAS a partial Aphemia,—that is, an inability to enunciate words though the knowledge of what he wished to say was distinct in his mind. It was partial, because he could at times, speak with a fair degree of facility and could always bring out monosyllables. that the symptom would be more correctly called an Anarthria. There was a partial Agraphia,—an inability to write what was in his mind; this latter conclusion was based on his statement that he could write neither from dictation nor copy. When asked to do so, after considerable effort, he spoke the longest sentence I heard from him,-

the sense of it being that he had tried to write a letter and could not get on paper what was in his mind. These symptoms indicated a partial involvement of the inferior frontal convolution,—with a very probable extension of the pressure on to the second frontal convolution.

Regarding the Facial Monoplegia:—Lying in close proximity to the inferior frontal convolution is the ascending parietal,—the two being separated by the Rolandic fissure. The lower extremity of this parietal gyrus is the motor center for the muscles of the face. The area of pressure, then, extended backward on to the inferior extremity of the ascending frontal convolution, the proof of which lay in the paralysis of the lower facial muscles and tongue.

Nothing was done for the injury except to dress the scalp wound and watch for improvement in speech and lessening of the paralysis. There was a perceptible decrease in the paralysis during the four days he was under observation. though little or none in the speech involvement. At the time he came to see me the injury was 12 days old and he replied affirmatively when asked if there had been perceptible improvement in his speech during the time which had elapsed since the injury. He was told that he might recover, but that if improvement did not set in soon it would be advisable to lift the pressure from the brain by trephining.

GASTROPTOSIS IN TUBERCULAR PATIENTS—A REPORT OF FIFTY CASES.

BY BOARDMAN REED, M.D., OF LOS ANGELES, CONSULTING GASTRO-ENTEROLOGIST TO THE POTTENGER SANATORIUM AT MONROVIA FOR DISEASES OF THE LUNGS AND THROAT.

AND

FRANK NEALL ROBINSON, M.D., ASSISTANT MEDICAL DIRECTOR OF THE SAME.

Ptoses of the various abdominal viscera are claiming a steadily increasing amount of attention from the medical profession, and yet not so much as their great importance demands. They cause directly or indirectly a very large amount of disease in the digestive. nervous, circulatory and even in the respiratory system. Asthma has long been recognized as a consequence, in many cases, of a faulty digestion or metabolism. M. Levin in a paper published in the Gazette Medicale, Belge, of April 2, 1908, discusses at length the connection between gastro-intestinal derangements and various disturbances in the respiratory tract, especially dyspnoea, asthma and coughs. He believes he has demonstrated that these affections are frequently a result of such derangements.

One of us has lately seen in his private practice two cases in which very severe and obstinate asthma seemed to be dependent upon a marked gastroptosis. The stomach in both these cases rested upon the pelvic organs and had become attached there by adhesions which could not be loosened by any means short of surgical intervention, and this was declined. In a third case a slight dyspnoea was associated with a moderate gastroptosis which could probably be overcome by the usual mechanical measures, but the patient is not yet ready to accept the necessary treatment. Large numbers of movable kidneys and prolapsed stomachs and intestines have also been observed by us, in which various forms of dyspepsia, and especially hyperchlorhydria, stubborn chronic diarrhœa, constipation or constipation alternating with diarrhea, neurasthenic symptoms, etc., have failed to recover until after a cure of the displacement.

But this paper has been prepared especially to report a large series of cases of gastroptosis in tubercular subjects seen by us in the Pottenger Sanatorium at Monrovia, California, during the period from April 15, 1907, to September 1, 1908.

Among 221 patients under treatment in the institution during the time mentioned, of whom 108 were men and 113 women, there were 133 who were carefully examined as to their abdominal organs because of gastrointestinal symptoms. Of these 133, there were 50, or 37.6 per cent., in whom the stomach was found prolapsed to a greater or less degree. Of these 50 cases of gastroptosis

28 were in women and 22 in men. When the inferior border of the stomach was lower than midway between the lower end of the sternum and the level of the umbilicus, it was considered abnormal; and when the upper border was also below normal, the case was classed among those of gastroptosis. However in 44 of the 50 cases, or 88 per cent., the lower border was at or below the umbilicus.

In the 28 cases in women, the lower border of the stomach was found at or below the umbilicus in 24 and in 6 of these it rested on the pelvic organs. In only 4 of the cases in women was the lower border above the umbilicus.

In the 22 cases in men, 20 showed the lower border of the stomach at or below the umbilicus, in 6 of which it rested on the pelvic viscera; and in only 2 was the lower border above the umbilicus.

Ten of the cases of gastroptosis were complicated with movable right kidney, all of which were found in women except one. Four cases showed the kidney in the third position, 4 in the second and 2 in the first position of descent.

In the more marked ptoses of the stomach the transverse colon was usually also prolapsed, forming either a U or V-shaped displacement downward. In but one of this series was the liver demonstrably prolapsed and that in a man markedly emaciated.

The following reports have been necessarily very much condensed and in some the findings on examination were incompletely recorded by the stenographer. Chemical analyses of the stomach contents were made when necessary and practicable but not as a routine measure in all cases, on account of the contraindications in many of them, and because in most of the others, overcoming the displacement and correcting faults in the diet, at the same time that great care was taken to keep the bowels open by the simplest and mildest means

possible, controlled the dyspeptic symptoms without the use of the stomach tube.

The method of diagnosis depended upon mainly was simple percussion or auscultatory percussion and friction, together with inspection and palpation as well as tapping to elicit a splashing sound in the stomach—clapotage.¹

When there was not sufficient gas in the stomach and intestines to render the boundaries easily determined without it, inflation was practiced by administering a teaspoonful of sodium bicarbonate followed by ten to fifteen drops of strong HCl well diluted, except that the administration of the HCl was omitted whenever a sufficient inflation resulted from the action of the free acid in the stomach upon the soda. This procedure generally gave at the same time some idea as to the presence or absence of free HCl in the stomach. When no inflation resulted from the soda given, two or three hours after an ordinary hearty meal, a deficiency of HCl could be inferred as probable. It proved, at least, that there was very little, if any, free acid of any kind present. When the soda alone produced a decided increase in the amount of tympany, the presence of a considerable amount of free acid of some kind could be inferred, and the condition of the tongue and appetite, together with the other symptoms often helped us to form an idea as to whether this acid was HCl or one of the organic acids from fermentation.

A few expressions in these reports may require explanation. "Reinforcement" here means having the patient alternately contract and relax the diaphragm and abdominal wall to aid in producing a splashing sound—clapotage. When the upper border of the stomach is said to be at the costal margin or at

any other specified level, without other description, it is to be understood that it intersects at such level the left parasternal line.

CASES WITH THE LOWER BORDER OF THE STOMACH ON A LEVEL WITH THE UMBILICUS.

Dr. J.—Without inflation, upper border of the stomach at lowest rib in mammary line. Lower border at the umbilicus. Right border 3 inches to right of median line.

Mr. McC.—Slight splashing on reinforcement about 2 hours after meal. Upper border of stomach one inch below lowest rib in the left parasternal line. Lower border level with umbilicus. Right border 1½ inches to right of median line. Belches considerable gas. Constipation marked.

Mr. D.—Splashing 2 hours after meals. Stomach after inflation: upper border 2 inches below the sixth rib. Lower border level with umbilicus. Belches gas. Bowels constipated.

Mr. M.—Splashing without reinforcement. Upper border of stomach one inch below normal. Lower border at umbilicus. Belches gas and has vomiting spells.

Mr. W.—Splashing, especially at umbilicus. Upper border of stomach at lowest rib. Lower border at umbilicus. Alternate diarrhoea and constipation.

Miss B.—Splashing without reinforcement. Lower border of the stomach at umbilicus. Belches gas. Constipation marked.

Mr. B.—Splashing, without reinforcement. Upper border of stomach below normal. Lower border at umbilicus. Belches occasionally. Constipation marked.

CASES WITH THE LOWER BORDER OF THE STOMACH BELOW THE LEVEL OF THE UMBILICUS.

Mrs. W.—Splashing, without reinforcement. Belches gas and passes

ISee full description of this method of outlining the boundaries of the viscera in "Discases of the Stomach and Intestines" by Boardman Reed, M.D., New York, E. B. Treat & Co. 1907.

much flatus. Upper border of stomach below normal. Lower border 2 inches below the umbilicus. Diarrhoea. Tubercle bacilli in stools.

Mr. A.—Splashing, without reinforcement. Right kidney in first position of descent. Upper border of stomach found one inch above the umbilicus, without inflation. Lower border in pelvis. Diarrhoea. Tubercle bacilli in stools.

Mrs. B.—Splashing, without reinforcement. Belches gas. Upper border of stomach at lowest rib in left parasternal line. Lower border in pelvis. Marked constipation.

Mr. C.—Splashing, without reinforcement. Upper border at lowest rib in left parasternal line. Lower border 3½ inches below the umbilicus. Right border 2 inches to right of median line. Belches gas. Diarrhoea, alternating with constipation.

Mrs. C.—Splashing, without reinforcement, $2\frac{1}{2}$ hours after luncheon. Right kidney in third position of descent. Upper border of stomach at lowest rib. Lower border 2 inches below the umbilicus. Belches gas, and vomits occasionally after eating. Constipation marked.

Mrs. C.—Splashing, without reinforcement, $2\frac{1}{2}$ hours after luncheon. Right kidney in second position of descent. Upper border of stomach at costal margin. Lower border $1\frac{1}{2}$ inches below the umbilicus. Belches gas. Constipation marked.

Mrs. B.—No splashing, even with reinforcement, 3 hours after meal. Liver normal size and in normal position. Upon inflation with soda bi-carb. 3½ hours after luncheon, slight increase of gas, showing only small amount of any free acid. Upper border of stomach just below the lowest rib in the mammary line. Lower border far down in pelvis. Right border 2 inches to the right of median line. Slight splashing after

drinking two glasses of fluid. Constipated mostly. Belches gas.

Mr. C.—Much splashing in stomach 2½ hours after luncheon. Stomach extends from 1½ inches below normal upper boundary far down in the pelvis. Right border 1½ inches to right of median line. Constipation marked, with considerable belching of gas.

Mrs. C.—Considerable splashing 2½ hours after luncheon. Without inflation, upper border of stomach found in the mammary line at the seventh rib. Lower border ½ inch below the umbilicus.

Mr. G.—Upper border of stomach at lowest rib in mammary line. Lower border far down in pelvis. Belches gas. Mostly constipated.

Mr. M.—Upper border of stomach ½ inch below lowest rib. Lower border 2 inches below the umbilicus. No splashing. Belches gas. Constipation marked.

Mr. O.—Liver slightly prolapsed. Upper border of stomach one inch above level of umbilicus. Lower border in pelvis. Right border 2½ inches to right of median line. No increase in gas after giving soda bi-carb., showing no free acid of any kind, therefore no free HCl. Belches considerable gas. Bowels alternately loose and constipated.

Mr. E.—Upper border of stomach one inch above lowest rib. Lower border one inch below umbilicus. Slight splashing on drinking two glasses of water. Belches gas. Bowels markedly constipated.

Mr. F.—Moderate splashing without reinforcement. Stomach limits: upper border at lowest rib, lower border 2½ inches below umbilicus. Bowels constipated. Belches gas.

Mrs. H.—Stomach limits: upper border 2 inches below lowest rib. Lower border one inch below umbilicus. Vomits occasionally. Belches gas. Constipated mostly.

Mrs. H.—Stomach limits: Upper border at lowest rib. Lower border one inch below umbilicus. Belches gas. Alternate diarrhoea and constipation.

Mrs. H.—Stomach limits: Upper border at umbilicus. Lower border in pelvis. Bowels constipated. Belches gas.

Miss McR.—Marked splashing. Stomach limits: upper border 1½ inches above navel. Lower border in pelvis. Belches considerable gas. Bowels constipated.

Mrs. McW.—Upper border of stomach at lowest rib. Lower border in pelvis. Belches gas. Bowels alternately loose and constipated.

Mr. N.—Considerable gas without inflation. Upper border of stomach $2\frac{1}{2}$ inches above lowest rib in left parasternal line. Lower border $1\frac{1}{2}$ inches below umbilicus. Belches considerable gas. Bowels constipated.

Mr. P.—Tender and sore over pit of stomach for nine years. Bloats in stomach and bowels. Belches considerably. Liver enlarged, especially left lobe. Marked splashing without reinforcement. Upper border of stomach at lowest rib. Lower border 4 inches below umbilicus. Bowels constipated.

Mrs. P.—Splashing without reinforcement, more marked on reinforcement. Before inflation upper border 2½ inches below sixth rib. Lower border one inch below umbilicus. Belches considerable gas, also gas in bowels. After inflation with soda upper border at lowest rib, lower border 2½ inches below umbilicus. Bowels constipated.

Mrs. P.—Without inflation, upper border of stomach ½ inch below normal. Lower border one inch below umbilicus. Much gas in stomach and bowels. Belches considerable gas. Bowels constipated. The patient after examination began wearing an elastic belt, which did not at first fit her or afford any relief. Two weeks before the writing of this report the belt was readjusted and made to fit properly. Previously her temperature had been rising to 102 degrees every afternoon. A

troublesome cough and a jerking sensation in her stomach had interfered much with sleep. Since the abdominal support was properly fitted, her temperature has not gone above 99 degrees. Her cough has stopped for the first time in two years, and her sleep has been good.

Miss P.—Splashing on reinforcement; none without. Upper border of stomach at seventh rib. Lower border ½ inch below umbilicus. Right kidney in third position of descent. Belches gas. Bowels markedly constipated.

Miss R.—Nephroptosis, second position. Pronounced splashing four hours after eating. Stomach limits: Without inflation upper border found at lowest rib in left parasternal line. Lower border 1½ inches below umbilicus. Liver enlarged in both directions. Gastric analysis after Ewald meal: By Guentzburg no free HCl; by dimethyl, .029%. T. A. 40. Diarrhoea (T. B.)

Mrs. R.—Marked splashing, without reinforcement. Stomach limits: upper border at lowest rib. Lower border 3 inches below umbilicus. Belches some gas. Bowels slightly constipated.

Mrs. R.—Nausea and vomiting. Stomach limits: upper border just below lowest rib. Lower border 3 inches below umbilicus. Belches gas. Bowels constipated.

Mrs. S.—Three years before was on prolonged forced feeding. Right kidney prolapsed and can be felt. No splashing. Upper border of stomach at lowest rib. Lower border ½ inch below umbilicus. Gastric analysis one hour after Ewald breakfast: no free HCl. Lactic acid present. Belches considerable gas. Diarrhoea. (T. B.)

Mrs. T.—Right kidney in second position of descent. Tender over gall bladder. Upper border of stomach at lowest rib in left parasternal line. Lower border 2½ inches below umbilicus. Right border ½ inch to right of middle line. Belches gas. Bowels constipated.

Mrs. T.—Right kidney in third position of descent. Marked splashing two hours after luncheon, without reinforcement. Stomach limits: upper border at costal margin. Lower border two inches below umbilicus. Belches gas. Diarrhoea.

Mrs. U.—After inflation with soda bicarb., upper border at lowest rib. Lower border 3 inches below umbilicus. Belches gas; bowels constipated.

Mr. D.—Without inflation, upper border of stomach at seventh rib. Right border ½ inch to right of middle line. Left border ½ inch to right of midaxillary line. Lower border ½ inch below the U. Moderate amount of tympany. Bowels constipated.

Mrs. B.—After inflation, upper border of stomach at lowest rib in mammary line. Lower border in pelvis. Right border about 2 inches to right of middle line. Gas in bowels, and belches. Bowels not constipated.

Mrs. B.—Upper border just above level of U. Lower border in pelvis. Belches. Constipated.

Mr. L.—Upper border on level with lowest rib. Lower border far down in pelvis. Right border not much to right of middle line. Belches gas. Constipated.

Mr. M.—Upper border 1½ inches too low. Lower border 2 inches below U. Belches gas. Constipated.

Mr. C.—Upper border 1½ inches below normal. Lower border in pelvis. Right border 1½ inches to right of median line. Constipated. Belches much gas.

CASES WITH LOWER BORDER OF THE STOM-ACH ABOVE THE LEVEL OF THE UMBILICUS.

Mrs. T.—Splashing without reinforcement. Belches gas. Upper border of stomach in nipple line about ½ inch above lowest rib. Lower border just above umbilicus. Right border 1½ inches to right of median line. Right

kidney in second position of descent. Bowels constipated.

Mr. B.—Splashing, without reinforcement. Belches gas. Upper border of stomach 3½ inches below nipple. Lower border one inch above umbilicus. Diarrhoea. Tubercle bacilli in stools.

Miss C.—Slight splashing after reinforcement. After inflation, upper border of stomach one inch below normal. Lower border one inch above umbilicus. Belches gas. Constipation marked.

Mrs. T.—Upper border in nipple line at lowest rib. Lower border ½ inch above U. Right border ½ inches to right of median line.

Mrs. W.—Right kidney in third position of descent. Upper border of stomach at lowest rib. Lower border one inch above umbilicus. Slight splashing after ½ glass of water.

Mr. P.—Splashing 2½ hours after meal, most near navel. Without inflation, upper border of stomach found 2 inches below normal. Lower border just above umbilicus. Bowels constipated. Belches gas.

The following questions naturally arise: Was there any causative relation between these displacements and the tuberculosis from which all the patients suffered; and, if so, did the tuberculosis produce, or predispose to, the displacements or vice versa?

As to the relative prevalence of gastroptosis authorities differ. Stockton is on record as follows: 2 "The fact that more than 50 per cent. of all civilized women in all classes of life have developed the condition known as enteroptosis, which means that the stomach and intestines, very often the kidneys, and sometimes the liver, are dragged down and remain permanently out of their position, is not generally known. Such, however, is the case; and this condition more than any other cause is responsible for the constipa-

²A manual of Hygiene, Phil., 1900; Article on Hygiene of Digestive Apparatus, by Charles G. Stockton, M.D., p. 47.

tion. backache, debility, biliousness, early loss of complexion, headache, and that long list of ailments of which so many women in all civilized countries are victims."

Stockton's estimate seems very high, but at any rate, a far larger proportion of women than of men, has generally been found to suffer from ptoses because in all probability of their unhygienic dress and less active habits.

Einhorn, in 1901, reported that among 1912 patients, 347 or 18 per cent. had splanchnoptosis including gastroptosis.3 Of these, 70 were in men and 277 in Of some thousands of cases of chronic digestive disorders treated by one of us in Philadelphia and Atlantic City, the proportion having visceral ptoses is believed to have been considerably larger than in Einhorn's series. They may be collated for a future pa-Among the 207 private patients treated by him since coming to Los Angeles during the past two years, exclusive of those seen in consultation, 69, or 33 I-3 per cent., had gastroptosis. these 32 were in men and 37 in women.

As bearing on the etiology of such displacements it is noteworthy that in this series of 207 cases, only five more women than men were found to have gastroptosis, while there was a very marked preponderance of women sufferers from the same disease among those treated earlier in Atlantic City and Philadelphia. A report concerning 50 patients, 22 men and 28 women, whose abdomens were examined at the office of one of us in Atlantic City during the months of July and August, 1896,4 showed that just one-half of them had gastroptosis; and it is a very striking fact that only 4 of the 22 men or 18 per cent, were thus affected, as against 21 of the 28 women, or 75 per cent. This by itself was, of course, too small a series of cases upon which to base any definite conclusions, but the figures become very significant when taken in connection with the positive recollection of the same observer that among all the extremely numerous cases of the kind. not yet tabulated, which were seen by him during the two decades before the present one, there was an extraordinary preponderance of women sufferers from gastroptosis and other visceral displacements, and also when we consider Einhorn's report of 1912 cases examined by him previous to 1901 showing 347 such displacements of which only 70 were men as against 277 in women.

The apparent marked decrease in the relative proportions of men and women thus affected is probably due in part to the greater physical exercise now taken by women of the better class-those who can afford to travel and consult specialists—but still more to a change in fashion, which has led to the general abandonment of the short corset tied in tightly at the waist line in such a way as to push down further and hold down any stomach partly displaced at the time of dressing or temporarily prolapsed after a full meal, and the substitution therefor of the less harmful long straight front corset, which constricts most the lower abdomen leaving greater freedom of movement to the organs above.

We believe that in most of the fifty tubercular cases now reported, the ptoses were primary, as well as to some extent a predisposing cause of the infection, and for these reasons: In many of them the tuberculosis was very recent, incipient, while the ptosis presented indications of having been long existing, adhesions sometimes having formed which held the stomach in the abnormal position; and indeed, the displacements were no more frequent in the far advanced cases than in the earlier ones, while the contrary would be true if the gradual weakening action

²N. Y. Med. Rec., April 13, 1901. 4A Few Practical Points in the Treatment of the Commoner Diseases of the Stomach, by Boardman Reed, M.D., Med. & Surg. Re-porter, Oct. 3, 1896.

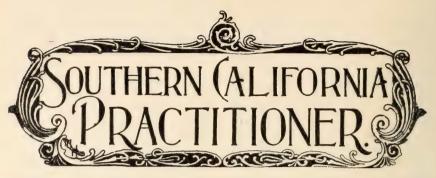
of the tuberculosis had caused the prolapse of the viscera. Moreover, the fact that the visceral ptoses as a rule exert a markedly disturbing effect upon digestion, metabolism and the general health is now well known; an effect which like all lowering influences predisposes to the development of tuberculosis.

Nevertheless there are doubtless some cases in which the forced feeding that for a number of years past has been so much in vogue in the treatment of tuberculosis, and often carried to a very harmful extent, has been directly responsible for a downward displacement of the stomach and transverse colon by the direct action of gravity in forcing down the overloaded viscera, as well as by exhaustion of the overworked secretory glands and the resulting lowering of the nutrition of the muscular and ligamentous supports of the organs. In the later stages of tuberculosis there naturally results a weakening of the same supports along with the wasting and enfeeblement of all the tissues, but patients during these stages, are usually recumbent most of the time and there fore little liable to displacements. It seems highly probable, then, that in most of our cases, the tuberculosis was secondary; that in many of them it was a consequence in part of the impaired health produced by the ptosis and that in the absence of such a predisposing condition infection might not have occurred. At all events our experience has proved that overcoming any coexisting visceral displacement has been followed by a better response to the essential curative measures for the principal disease.

In all known tubercular cases, therefore, we should search for and correct any existing visceral displacement as a very helpful preliminary to the cure of the major disease; and to prevent the development of tuberculosis in persons predisposed thereto by reason of lowered nutrition, the same precaution is equally important.

TREATMENT. The cases which form the subject of this paper, were under the general care of the staff of the institution including Drs. F. M. Pottenger and Charles C. Browning as well as one of us (Robinson) while the other of us (Reed) saw at intervals, in consultation, those having dyspeptic symptoms. The treatment was mainly dietetic and mechanical—much the same as is usual in nontubercular patients with ptoses, except that gymnastic exercises could not be employed, since they would be liable to aggravate the tuberculosis.

In the severer cases, especially when the temperature ranged high, the patients were confined to bed in tent cottages while the generous amount of nourishing food necessary to maintain the nutrition as an indispensable condition to the cure of the tuberculosis, was given, as a rule, in three moderate regular meals at the usual hours, with often light luncheons of eggs, milk, etc., between, care being taken that the stomach was never overloaded. prolapsed organs were raised as much as practicable by special manipulations including vigorous upward pressure while the patient exhaled strongly and held the lungs empty as long as possible. Then as an abdominal support, straps of z-o adhesive plaster were first applied, unless in the warmest weather, and later a broad elastic belt fitted very snugly and accurately to the lower abdomen by an expert in such work. This belt was worn constantly whenever the patient was out of bed and care was taken to see that it held up effectively the displaced organ. It was found advisable to keep on the belt even in bed when the displacement was very marked.



A MEDICAL, CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE.

Established in 1886 by WALTER LINDLEY, M.D., LL.D., Editor and Publisher.

This journal endeavors to mirror the progress of the profession of California, Arizona and New Mexico.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN, Assistant Editors.

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EDITOR SOUTHERN CALIFORNIA PRACTITIONER. Subscription Price, per annum, \$1.00.

1414 South Hope Street, Los Angeles, California.

EDITORIAL

CALIFORNIA AT THE INTER-NATIONAL TUBERCULOSIS CONGRESS.

In comparison with the showing made by other States at the recent International Tuberculosis Congress, the exhibit of California was not particularly praiseworthy. And comparing the importance which the tuberculosis problem occupies in the Golden State, with the statistical and other evidence presented by this commonwealth at Washington, the result was by no means creditable to us. This deficiency is to be explained by the fact that only in the last few years has the California State Board of Health been so constituted as to carry on public health work to the best advantage. With the great mass of other work to be done, and the very limited appropriations to the department, the statistical work has had to wait.

Exhibits were made by the State Board of Health, by the California Association for the Study and Prevention of Tuberculosis and by the Barlow and Pottenger Sanatoria. The attendance of delegates from this State was most excellent. This issue prints some of the impressions of several of our Southern California representatives.

In Competition II, for the best exhibit of an existing sanatorium for the treatment of curable cases of tuberculosis among the working classes, the highest prize was divided between the White Haven Sanatorium of Pennsylvania and the Brompton Hospital of England, the Barlow Sanatorium of Los Angeles securing an "honorable mention."

A special silver medal was also awarded the Barlow Sanatorium for its

admirable models in regard to excellence in detail, construction and installation.

In Competition VII, for educational leaflets entered under assumed names, the leaflet for mothers, limited to one thousand words, and signed "Develop Healthy Bodies," written by Dr. George H. Kress of Los Angeles, was awarded the gold medal; and the leaflet for teachers, limited to two thousand words, which was signed "The Teacher an Important Factor," and which was also written by Dr. Kress, was awarded the silver medal.

THE PLACE GIVEN SANATORIA IN THE FIGHT AGAINST TUBERCULOSIS.

That Sanatoria have come to stay, that they are recognized by all as probably the best method of treatment, and that they are a great factor in the education of every community in which they are placed, was impressed upon the great gathering at Washington by the papers of sanatorium men from all parts of the world. Although sanatorium treatment may be carried out successfully in the home by proper medical supervision, the most satisfactory results reported came from Sanatoria. The regulation of the daily life, the education in hygiene, healthy regular habits, the amount of rest and exercise for a tuberculous patient, the proper diet, and special treatment, all so difficult to obtain elsewhere than in Sanatoria, were pertinent facts forced upon all. To those who may not have considered seriously the importance of sanatorium treatment, the words uttered by Latham of London should be of assistance: "The value of sanatorium treatment is best grasped by a consideration of the results obtained before and after the introduction of sanatorium methods. In 1867 a statistical investigation of the records of patients attending the outpatient department of the Brompton Hospital for consumption in London, showed that 83 per cent. of the patients who sought advice in the first stage of consumption died before the end of the fifth year from the onset of their first symptom. In 1905 the statistical investigation of the records of patients treated at the Prussian and Hessian State Railways Sanatorium, showed that 53 per cent, of the patients treated were in full work and earning their livelihood at the end of five years, not from their first symptom, but from the commencement of the sanatorium treatment." With our recent knowledge and the manner of handling consumptives, it is now well recognized that other methods of cure may be used with equal advantage. In other words, at the Congress the sanatorium has taken another place; it no longer occupies the center of the stage, but takes its place among the larger group of curative and preventative methods. Such a group is necessary in every large community for the prevention and eradication of tuberculosis; a group that consists of a wellorganized dispensary, visiting and district nurses under settlement work, hospital for the advanced cases, a sanatorium for the curable cases whether

early or advanced, a day and night camp, a health board which works in conjunction, and a farm for convalescents. In such a working force the dispensary should occupy the central position, and never stand alone. Phillip of Edinburgh emphasized this idea most strongly and said: "The dispensary should be a sort of clearing-house; it should be related to the various departments and an investigating bureau." Where the dispensary has these connecting links, it is possible by separating and directing the patients to individualize for the best interests of each case. In operating such a system it will be found that some may be well cared for at the dispensary; the stronger and those who must work may receive the necessary instruction at a night camp; those who cannot leave their homes at night may have food and teaching in the day camp; some who are unable to leave their beds or homes may be visited by the district nurse; others sent to a hospital for far advanced cases; and still others of a curable type sent to sanatoria, while convalescent or arrested cases may work on the farm to complete a cure.

Another change for the sanatorium was made by the general feeling that if prevention of the disease was to be ever realized, Sanatoria should care for more of the advanced cases, such as are clinically advanced but not hopeless. This was an expression of much interest to the writer, since these are the cases that when left at home are too often centers of infection but when taken away from their families and poor surroundings prevent sources of infection,

and the saving of many lives. It was urged that we need more of these institutions, hospitals and sanatoria, for advanced cases, which, when properly conducted are, in truth, schools of education where the principles and practices of hygiene are taught and passed on to others who are reached by no other means.

Since sanatoria have made such excellent records and shown undisputed good results with the early cases that they are recognized by all as the best method of treatment, they can afford to admit more cases that need isolation and are not of the earliest type of the disease, without lessening their strength. Even if the results of cure be less brilliant, the greater good for eradication and prevention of the disease will result.

A strong plea was made to establish working farms, where the arrested or cured cases of the working classes from a sanatorium could go and complete the cure under supervised labor, since it is recognized that the working classes must return too quickly to strenuous life and often to poor surroundings, while the well-to-do on leaving a sanatorium have a better chance of keeping well.

From the expression at the Congress, it is quite evident that sanatorium treatment will include less rest cure than heretofore. As rest is essential early in the disease, so it is found that work at later periods is necessary to help regain a healthy body. Just when rest or work is proper for the case must be left to the attending physician. Graduated work or labor is prescribed and

increased until the hardest labor may be accomplished, similar to the method of graduated labor so successfully carried out at the Frimley Sanatorium in England. When work or labor is prescribed, the temperature and clinical symptoms are carefully noted and watched.

The construction of sanatoria was a feature of much interest. As education of the patients is a necessary factor, a sanatorium should not be built on the plans of a general hospital, but receive the details of an outdoor life. Since patients must remain months under observation, the place should take on more of the home atmosphere, be made comfortable, attractive and simple with luxuries avoided. Construct the buildings and rooms with reference to plenty of light, air, and sunshine. Porches for beds should be connected with the rooms or wards, or there should be open air cottages. In cold climates, such porches may have glass enclosure for protection in the severe weather. Tents are not recommended as they are too hot in summer and too cold in winter. For compactness, two stories with similar porches may be built; and for economy, eight to ten patients may sleep on the same porch. The location should be selected with a thought to absence of winds, dust, noise and smoke, accessibility and future extension. It is wiser not to care for too many patients at one sanatorium, a good limit being

There are more than 100 free sanatoria in Germany, with an average of 100 patients each, and Pannwitz of Berlin says that the cost of erecting such sanatoria need not exceed \$1000 a bed. Others have put the cost at \$500 a bed, which is a low average. Carrington was able to show that the cost in New Mexico, by using tents, was \$150 a bed.

To emphasize the need of sanatoria in every community, one of the resolutions passed at the Congress was: "That we urge upon the public and upon all governments the establishment of hospitals for the treatment of advanced cases of tuberculosis; the establishment of sanatoria for curable cases, and the establishment of dispensaries and day and night camps for ambulant cases of tuberculosis which cannot enter hospitals and sanatoria."

W. JARVIS BARLOW.

TUBERCULIN FROM THE STANDPOINT OF THE INTERNATIONAL CONGRESS.

While the greatest good that will come from the International Tuberculosis Congress, which met in Washington September 21 to October 12, will undoubtedly be the great stimulus which will be given to the cause of the prevention of tuberculosis, yet the gathering was notable for other things as well. There was a general crystallizing of thought along the lines of infection, prevention and cure, which will undoubtedly influence the work of many investigators and clinicians during the coming years.

The attitude of the Congress on tuberculin was especially noteworthy. Tuberculin as a therapeutic agent has been gradually gaining favor during the past ten years, and during the past two or three years it has progressed beyond expectation. Not only has much of the fear which was formerly attached to it during its gross misuse in the early nineties disappeared, but many who, at that time discarded it, are now employing it. At the present nearly all tuberculosis specialists are favorable to the employment of tuberculin, and most of them are using it. Few well-regulated sanatoria today fail to give their patients the benefit of tuberculin treatment. At the Congress, it is especially worthy of mention, that there was scarcely a word of disapproval uttered against this therapeutic agent.

This reversal of opinion comes from a better understanding of tuberculosis, a more thorough comprehension of the subject of immunity and its production and a better appreciation of the splendid clinical results which have been produced by those who have been giving their patients the benefit of tuberculin treatment during the past seventeen years.

Many who are now convinced of the value of tuberculin would still be doubters, if its beneficial results had been confined to the treatment of pulmonary tuberculosis; for this complex disease, with its variability in symptoms and course still remains a closed book to many, even of our brightest men; but, when tuberculosis of the larynx which can be watched from day to day in the laryngeal mirror is seen to yield, when the effusions in tuberculous pleurisies and peritonitis are seen to disappear without aspiration or operation, when tuberculous glands and even the sinuses resulting from their spontaneous rupture or those remaining after operation are seen to heal, when lesions of the bones, genito-urinary tract, ear and eye are all seen to get well under tuberculin treatment, proof of its value is furnished which can not be denied.

The scientific world now recognizes tuberculosis to be the same disease no matter where the lesion is located. Tuberculosis of the lungs, larynx, intestines, genito-urinary tract, bones, glandular system, eye, ear, or skin are all the same pathological process and the cure of all these affections is the same—the establishment on the part of the affected organism of an immunity to the tubercle bacillus and its toxins.

The action of tuberculin is based upon a fact which has been well established by workers in the field of immunity, viz: a specific poison stimulates the body cells to the formation of specific protective substances. Thus typhoid toxins will stimulate to the production of specific typhoid antibodies, staphylococcic toxins to specific staphylococcic antibodies, tubercle bacillus toxins to specific antibodies against the tubercle bacillus.

Not only will these specific toxins stimulate the body cells to the production of specific antibodies, but without them there can be no specific antibodies produced; so if a patient recovers from tuberculosis without the therapeutic use of tuberculin, he does so because he has produced his own toxins (tuberculin) which stimulated the cells to the formation of protective antibodies. He can not get well without tuberculin; he must either form his own in the focus of infection or must receive it from

without. For certain reasons which we cannot discuss here the patient often fails to produce his own tuberculin and can only be cured by artificial injections. It was the consensus of opinion of the Congress that tuberculin in the hands of careful men is a safe remedy, but that it should not be used promiscuously. Most men believe that as yet its administration should be confined largely to institutions, where the patients are under the direct care of the physicians.

The danger which now seems to threaten tuberculin is an over-enthusiasm, which will cause it to be used by men who will neither understand it nor the disease which they are treating; thus it will be used wrongly, harm will result, and erroneous opinions will be given as to its value and danger.

F. M. POTTENGER.

IMPRESSIONS OF THE RECENT WASHINGTON CONGRESS.

The sixth triennial session of the International Congress on Tuberculosis has become an item of history.

It is too soon for any one to say just how much good has been accomplished as a result of the great amount of thought, energy and money expended. Farthermore, the impressions gained by any single individual in attendance are limited, and many such impressions are liable to be erroneous. That an immense amount of work was imposed upon the local committee there can be no question, nor is it probable that any local committee could have done better under the circumstances.

The appropriation of \$40,000 by Congress, much of which was used in fitting up a building temporarily to accommodate the session, was by far too small. A commendable feature of the place of meeting is that it was large enough to accommodate all of the seven sections and to afford room for the exhibits of the various nations, and many of the States of our own Republic.

A most lamentable feature was the fact that the building was unfinished, being a temporary remodeling of the new National Museum Building, which was only partially constructed, for the accommodation of this meeting. The partitions separating some of the sections were thin wooden structures, supplemented by cloth material in some places, so that the applause in one section could be plainly heard, and served to interrupt the work of the other sections. The acoustic properties in some of the rooms were such that it was impossible to hear many of the speakers one-third the distance of the room.

Farthermore the approach to the building was through the market place of Washington, which for filth and general unsanitary conditions would be difficult to equal in any other American city.

These circumstances were exceedingly unfortunate. It is a very easy matter to criticise; it is a much more difficult matter to care for nearly 6000 delegates and their friends in a manner satisfactory to all.

The words of President Roosevelt may well be quoted here:

"The importance of the crusade against tuberculosis, in the interest of

which this Congress convenes, cannot be over-estimated when it is realized that tuberculosis costs our country two hundred thousand lives a year, and the entire world a million lives a year, besides constituting a most serious handicap to material commerce, prosperity and happiness, and being an enormous expense to society, most often in those walks of life where the burden is least bearable. Science has demonstrated that this disease can be stamped out, but the rapidity and completeness with which this can be accomplished depend upon the promptness with which the new doctrines about tuberculosis can be inculcated into the minds of the people and engrafted upon our customs, habits and laws. The presence in our midst of representatives of world-wide workers in this magnificent cause gives an unusual opportunity for accelerating the educational part of the program."

The work of the Congress was divided into two parts: The tuberculosis exhibit and the work of the various sections, of which there were seven—with chairmen as follows:

Section I—Pathology and Bacteriology, Dr. Wm. H. Welch.

Section II—Clinical Study and Therapy of Tuberculosis, Dr. Vincent Y. Bowditch.

Section III—Surgery and Orthopedics, Dr. Charles H. Mayo.

Section IV—Tuberculosis in Children, Dr. A. Jacobi.

Section V—Hygienic, Social and Economic Aspects, Mr. Edward T. Devine.
Section VI—State and Municipal Control, Surgeon-General Walter Wyman.

Section VII—Animal Tuberculosis, Dr. Leonard Pearson.

Rather of a novelty was the paper by Dr. Raw, of Liverpool, in which he made the assertion that investigations made by himself and his associates, had led them to believe that tuberculosis of the bones and joints, of the peritoneum and tuberculous meningitis were caused by the bovine bacillus, while pulmonary tuberculosis was caused by the human bacillus. Doubtless his work will be continued along this line, and it will be very interesting to see whether this theory is accepted by others.

In connection with the Congress a series of special lectures were delivered in Washington and elsewhere by eminent foreigners.

The California exhibit consisted of the most beautiful and complete models of the building and furnishings of the Barlow Sanatorium, with photographs illustrating the same, and a model of one building, and photographs of the Pottenger Sanatorium. Californians are under deep obligations to both Dr. Barlow and Dr. Pottenger for their efforts in this direction.

The impression most prominent in the mind of the writer concerning the general result of the Washington Congress is the good accomplished by arousing the public through the medium of the press to a realization of the work being done by the medical profession in combating the great White Plague. It would seem that this truly altruistic movement cannot fail to enlist a more concerted action on the part of the laity

to participate in the endeavor to lessen the terrible ravages of the disease. Only through the co-operation of the public can we hope to accomplish the good for which we aim, namely, the removal of tuberculosis from the list of assets of the physician.

G. L. COLE.

THE SURGICAL SECTION OF THE INTERNATIONAL TUBERCULOSIS CONGRESS.

The two most important facts or impressions constantly before the minds of the vast throng of delegates representing the principal nations of the earth at the Washington Tuberculosis Exposition were:

First, that tuberculosis is a curable disease.

Second, tuberculosis is a preventable disease.

The two proven methods of cure are fresh air or sanitorium treatment, and abundance of good nourishment. Supplementing these, but of minor importance, are medicines and tuberculin administration.

In the surgical section all speakers and writers were specific and careful to lay great stress upon the value of the above methods as adapted to surgical cases as well as non-surgical tuberculosis.

In joint or other local tuberculosis lesions, it is just as important to nurse and develop to its highest degree the physiological resistance of the body as in pulmonary tuberculosis. Absolute rest and immobilization to prevent fric-

tion of irritated or inflamed surfaces, io of the highest necessity if we would arrest further destruction of tissues or prevent metastises in tuberculous processes. While there were few new and startling surgical procedures exploited, the thoroughly tried were given their true established value.

Two subjects of cerebral tuberculosis were cited where a large trephin applied to the parietal region had resulted in recovery in what are usually fatal cases. It was agreed that this treatment should be tried where a diagnosis was reasonably certain.

Tubercular hip joint abcesses should not be incised or at most only antiseptically aspirated. Over two hundred instances of sinuses about the hip joint were enthusiastically reported as having been rapidly cured by Beck's Bismuth-Vaseline injection of the proportion of 33% Bismuth.

Numerous X-ray photographs were exhibited of tortuous fistulous tracts, whose direction of tortuousity was brought out plainly by first injecting them with Bismuth paste before the pictures were taken. Their location by this method greatly facilitates their thorough exploration and eradication.

For the immobilization of tubercular joints, plaster of paris properly applied was considered to be the best material. In marked tuberculosis of one kidney, thorough removal of the organ from the ureter should be done. The lumen of the ureter should then be destroyed by the injection into it of a few drops of pure carbolic acid. The mouth of the ureter is then sutured to the wound

through which the kidney has been removed. In this situation it can be more really discovered and removed by the aid of a second incision over McBurney's point if in the future it should rease tracklesime.

Tubercalar perminitis is best treated and more certainly sured by laparatomy to permit light and air to enter the abdominal cavity

Tuberculosis of the breast, of which a few cases were reported, of the pleura, thyroid and large cavities of the lung, map, if favorably situated, be cured by operation.

Conservative treatment before the age of ifteen should be thoroughly tried, especially in asseous tuberculosis. If it fails or the subject is an adult, success is most surely attained by the thorough use of the knife, chisel and ourette. These to be followed up by proper nourishment and outdoor life in the best climate obtainable.

D C. BARBER.

THE CARE OF THE INSANE.

Last May we visited the State Insane Hispital at Rochester, Minn.

There was no fence between the public highway and the beautiful grounds. Scattered over a yard of say fifty acres were probably three hundred patients. I. e., we were told they were patients. The casual observer would not think of them being patients. There were groups of old ladies sewing, other groups reading, others just talking, and a spirited ball game in progress that was watched with deepest interest by the men.

Every State in the Union is taking

steps toward adopting the modern treatment of the insane, and they are all slowly abandoning the plan that treated the mentally diseased as crimmals.

In Illinois the institutions for the insane are under the general control of the Board of State Commissioners of Public Charities. Miss Julia C. Lathrop—America's greatest woman—is the great power for good on this board. She is heartily seconded in her work by Dr. Frank Billings and other distinguished collaborators with Wm. C. Graves as secretary and executive officer. In a recent address Mr. Graves said:

"The Illinois Board of Charities' plan contemplated an attempt to reduce the number of insane in institutions by the following medical procedures:

- "I. The education of physicians in general practice by clinics in State hospitals for the insane, to recognize the danger signals of approaching insanity and by proper treatment keep persons from going to hospitals for the insane.
- "2. The higher education of physicians in the State service and the use of hydrotherapy so as to cure or improve the acute so-called 'curable' cases and thus get patients out of the hospitals instead of allowing them to become chronic.
- "3. The industrial re-education of the chronic hopeless insane so they could be wholly or partly self-supporting outside of hospitals.

"In carrying out the first proposition clinics were begun at Elgin. Physicians of seven towns in the Fox River Valley eagerly availed themselves of this means of practical education which the medical colleges had been unable to provide them as students."

Miss Lathrop has arranged so that the Chicago School of Civics and Philanthropy has a section devoted to teaching attendants of the insane how to interest and occupy their patients. A number of representative attendants of the various state hospitals for the insane were granted leave of absence for five weeks at full pay, with an allowance for room and board, that they might attend these sessions. Attendants were present also from New York, New Jersey, Indiana and Nebraska.

Lectures were given on psychology, psychiatry, pedagogy and social welfare, but the most important part of the course was the teaching of different occupations suited to the mentally sick and the application of the principles taught in visits to nearby asylums. These students go back to their work with a new view of the possibility of interesting, arousing and educating their patients by useful occupations and amusements.

At the recent session of the California State Conference of Charities and Correction convened in Oakland, Dr. Elmer Stone, Superintendent of State Hospital at Napa, said, in the course of a very able address:

"All our institutions are crowded beyond capacity. At Napa 1850 persons are sharing accommodations intended for 900. We must have improvements and better hygiene. What we need is properly equipped buildings, not colossal structures. Do away with useless trimmings and spend the money in practical, beneficial ways. Modern treatment calls for as little restraint as possible. There should be no heavy iron bars, no doping with narcotics. Not many years ago violent patients were strapped to cots. This is now regarded to barbarous. Rigid and searching medical examinations should be made to discover the cause of breakdown."

Dr. Stone urged that a psycopathic ward be established in a leading hospital in San Francisco and in Los Angeles and that each patient suspected of insanity be first sent there and studied for a few weeks before being committed to an asylum. This plan has been adopted in Massachusetts where 23 per cent. have been restored to mental health without the stigma of commitment,

Judge Melvin in an address on the same occasion said: "In the commitment of the insane in each county there should be a permanent tribunal of experts. We need more of the physician and less of the lawyer, more of the expert and less of the solemn forms of jurisprudence."

Dr. J. W. Robertson said: "Our State has spent \$1,500,000 in a palatial building at Napa. On the outside it is magnificent. On the inside it is damnable. Five hundred small rooms measuring eight feet by ten, and two patients in each room! I have seen the prostrate bodies of poor demented creatures in hallways at night, herded like sheep. The whole system is wrong."

Dr. Stocking, Superintendent of the State Hospital for the Insane at Agnew, told how well since the earthquake they had conducted their institution in mere shacks. He also presented the plans for the new Agnew buildings. These, to some extent, approximate the cottage system and are far ahead of the buildings of any of the other California institutions; but, as these so-called cottages are to accommodate from one hundred to one hundred and fifty patients, we think the plan is far from ideal. No cottage should be for more than forty patients. The general opinion of the experts present at this meeting was that Agnew should be devoted to the curable patients and Napa and Ukiah to the chronic.

California has the largest insane rate in America I to 250, New York comes next with I to 300, while Missouri only has one insane to each one thousand of population. Through the courtesy of the Illinois State Board of Charities we present, on pages 562 and 563, two graphic pictures showing the New Way and Old Way of treating the insane.

One great step forward in the treatment of the insane is the employment of women. In the Stirling Asylum, one of the leading Scotch hospitals for the insane, the management employs women as attendants in male wards—three times as many as there are of male attendants. After several years' experience in the employment of women attendants for male patients Dr. Geo. M. Robertson, Superintendent of the Royal Edinburgh Asylum, in his official report says:

"The constant presence in the wards among the patients, both male and female, of these highly trained women of good social position has been attended by the most beneficial results, by the introduction of refinements and increased decorum, and by the diminution of forceful methods of management."

Miss Lathrop recently visited Scotland and her observations as follows in part—are of interest:

"The atmosphere of homely comfort at the Stirling Asylum was especially noticeable. I recall a young slip of a nurse, of the attendant class according to our nomenclature, perched at the head of a bed occupied by a patient, a big elderly man who was restless and always wanting to prowl about. The nurse had slipped one hand through his arm to keep him in bed, while with the other hand she was playing checkers with another patient just emerging from a state of silent indifference and beginning to show an interest in his surroundings. The strength of that kindly hand wsa quite as effective as any one of the many systems of bed restraint which I have observed in use in various institutions, and the training of the assistant herself in dealing with the patients as human beings was going on at the same time. It was the attitude of a mother with a household of children, perfectly direct, simple and effective—the attention of the nurse, order, entertainment-all equally important and all secured by the method of apparently doing several things at once which every mother who cares for her own children learns by daily practice.

"Again, when one saw a procession of old men going out beyond the gates to walk along the road, the most helpless led and encouraged by their smiling, rosy young nurses, one had again the comfortable feeling that these children of a larger growth were getting just what they needed."

The members of the medical profes-

sion are the leaders in this great reformation, but the laity should be thoroughly informed, so that an imperative public sentiment shall overwhelm all political obstacles.

EDITORIAL NOTES

- Dr. I. S. Lewis has located in Tucson.
- Dr. F. Raven has located in San Diego.
- Dr. F. M. Wellington has located in Hueneme.
- Dr. Bennette of San Bernardino has recovered from an appendectory.
- Dr. Samuel Outwater of Riverside is home again.
- Dr. C. C. Gleaves has opened offices in Rawhide, Nevada.
- Dr. M. C. Billings, late of Rialto, has located in Wilmington.
- Dr. West Hughes of Los Angeles has returned from New York City.
- Dr. Hoell Tyler of Redlands has returned after three months in Europe.
- Dr. C. C. Ledyard, formerly of Arrowhead Hot Springs, has located in Rialto.
- Dr. T. A. Winders of Tucson has been spending his vacation in Los Angeles.
- Dr. I. R. Bancroft has been appointed assistant health officer of Los Angeles.
- The Redmen propose establishing a national tuberculosis sanatorium in Arizona.
- Dr. Sargent is a recent arrival from the East and has located at Mayer, Arizona.

- Dr. I. L. Bond of Holtville, Imperial county, recently spent two weeks in Los Angeles.
- Dr. R. R. Knott, formerly of Portland, Oregon, has located in Yuma, Arizona.
- Dr. D. H. Calder of Provo, Utah, has been meeting friends in Los Angeles.
- Dr. Ancil Martin of Phoenix was recently called professionally to Cananea, Mexico.
- Dr. H. G. Lamb has been appointed Southern Pacific Surgeon at Coachella, California.
- Dr. Arthur D. Bechtel, who spent the summer at Prescott, has opened offices at Tucson.
- Dr. F. P. Bowen of Rhyolite, Nevada, is the Republican nominee for State Senator.
- Dr. W. Jarvis Barlow has purchased a beautiful ranch near Lakeside, San Diego county.
- Dr. Ross Roberts has located in Pasadena where he is associated with Dr. W. H. Roberts.
- Dr. L. S. Thorpe of Los Angeles is building a summer home on the water front at Balboa.
- Dr. Henry B. Stehman of Pasadena has returned from International Tuberculosis Congress.

Oscar Fingal O'Flahertie Wills Wilde was the son of Sir William Wilde, the noted Irish oculist.

Dr. Bim Smith of Hermosillo, Mexico, has been greeting friends at the Los Angeles hospitals.

An effort will be made at the next session of the Arizona Legislature to have a bounty placed on skunks.

Dr. J. G. Mackey of San Fernando has been attending the Masonic Grand Lodge in San Francisco.

Dr. and Mrs. Ancil Martin of Phoenix have returned from a sightseeing trip to the City of Mexico.

Dr. John E. Hill, who formerly practiced in Akron, Ohio, has located in Azusa, Los Angeles county.

Dr. Arthur A. Libby, the oculist, has returned to his home in Pasadena after a few months in the East.

Ulcer of the Stomach, Pathogenesis and Pathology, is a reprint by Fenton B. Turch, M.D., Chicago.

Drs. R. D. Potts, W. R. Livingston and A. A. Maulhardt have opened a private hospital in Oxnard.

Dr. Joseph K. Swindt of Pomona is home again after spending several weeks in the hospitals of Chicago.

Dr. J. W. Hearn, the militant surgeon of San Diego, was recently in Los Angeles for a few days.

Dr. J. B. Cook of Los Angeles has established his offices in the Grosse building, 6th and Spring streets.

Dr. J. M. Armstrong of Los Angeles has been spending a few weeks in the clinics of Chicago hospitals.

Dr. Carl Kurtz of Los Angeles has been elected Vice-President of the Pacific Association of Railway Surgeons.

Dr. W. S. Mortensen of the Palms, who has devoted two months to hospital work in the East, is at home again.

Montgomery's Gynecology has had a large sale, the number of copies disposed of having already reached 13,000.

Dr. H. C. Richter has taken charge of Dr. Harvey Smith's practice during the latter's temporary absence from Calexico.

Dr. David C. Barber, Superintendent of the Los Angeles County Hospital, has returned from the Tuberculosis Congress.

Following Dr. J. B. Murphy's example Dr. E. J. Senn has resigned from the surgical department of Rush Medical College.

Dr. C. A. Shepard of Needles read a paper, October 12th, before the Riverside County Medical Society. on "Tuberculosis."

Dr. Frank Maitland Madison of San Diego has established a health resort on a beautiful ranch adjoining Ramona, San Diego county.

Dr. E. D. Allen is the only practicing physician in Lida, Nevada, the justice of the peace and also the owner of valuable mining property.

The Phipps Tuberculosis Dispensary report for 1907 says: "Tobacco, by depressing heart action and circulation, predisposes to tuberculosis."

Dr. Charles Lee King of Pasadena, in the course of his trip East, enjoyed a visit with his brother, Henry Churchill King, president of Oberlin College.

Dr. Prudence Welch, W. H. Newman, Bernard Shelton and A. Winegar Simpson were recently elected members of the Long Beach Medical Society.

An interesting meeting of the Imperial County Medical Society was held at Brawley October 10th. There were present Drs. Bumgarner (President) and Patton of Imperial; Peterson and McCombs of El Centro; Dr. Brook of Holtville and Dr. Cook (Secretary) of Brawley.

Dr. J. E. Adams of Flagstaff, Arizona, has been doing post-graduate work in eastern hospitals. Dr. W. I. Sipe at-

tended to Dr. Adams' practice meanwhile.

The addresses of Dr. Norman Bridge and Dr. F. M. Pottenger of Los Angeles were prominent features of the recent International Tuberculosis Congress.

Dr. Geo. H. Kress of the editorial staff of the Southern California Practitioner received a gold medal from the recent International Congress of Tuberculosis.

Dr. Earl S. Bullock of Silver City, New Mexico, has returned from the city of Washington where he participated in the International Tuberculosis Congress.

Dr. Achilles Rose says: "The word 'tuberculosis' is one of the hybrid formations of medical slang. A correct term is 'phymatiosis,' from phymation, a tubercle.

Drs. W. V. Whitmore of Tucson and Charles F. Hawley of Bisbee were in Phoenix on October 5 and 6, attending the meeting of the Board of Medical Examiners.

Dr. E. S. Pillsbury, 134 North Palm avenue, Hollywood, entertained members of the alumni of Cooper Medical College at his home Thursday evening, October 1st.

Drs. C. E. Yount of Prescott, J. W. Foss of Phoenix and C. T. Sturgeon of Globe have returned from the International Congress on Tuberculosis at Washington.

Dr. B. F. Kierulff, formerly one of the well-known physicians of Los Angeles, has returned after an absence of ten years. He is located at 1936 Magnolia avenue.

Wednesday, October 14th, Dr. Charles Willoughby Anderson of Los Angeles and Miss Edith Seaton Crockett were married at the residence of the bride's parents, Danville, Quebec.

Dr. R. de Lecaire Foster of San Diego left October 12th for New York City, where he will remain a month or six weeks to take a post-graduate course in his profession.

Dr. Shawk has resigned as physician at the Indian School at Phoenix, Arizona, and is now located in Carson City, Nevada. Dr. White takes the position at the Indian School.

Drs. W. Harriman Jones of Long Beach, Paul Adams and C. W. Decker of Los Angeles, all medical officers of the army, have returned from the summer encampment at Atascadero.

Dr. J. S. Riggs, aged 77, died in Redlands October 7th. He was a graduate of the Chicago College of Physicians and Surgeons, and practiced in Redlands for 21 years.

Isaias W. Hellman gave \$100,000 to the Mount Zion Hospital, San Francisco, September 10th, to be used in erecting a new building to be known as the Esther Hellman Building.

At a recent meeting of the Long Beach Medical Society Drs. H. O. Bates, William Lawrence Woodruff and Donald J. Frick read papers pertaining to the dietetics and diseases of children.

Dr. J. H. McKellar of Pasadena is devoting himself to hospital work in New York City. The doctor says the hospitals of New York furnish the best opportunities for the oculist and aurist.

Night-sweats almost invariably stop as soon as the patient is placed at rest in a well-aired room and given the proper things to eat. Dilated pupils occurred in 30 per cent. of the 1700 cases observed.

For offensive sweating Dr. Edwards of Mankato, in the Journal A. M. A. recommends Thiersche's powder, i. e., one part salicylic acid to ten parts of boric acid. Dust on the feet and in the stockings every morning.

Dr. Francis C. S. Sanders, said to have been a Cambridge graduate and at one time a prominent English surgeon, was on October 3rd sentenced by

a Los Angeles judge to six years in the penitentiary for forgery.

Dr. C. B. Dickson of Los Angeles was recently elected High Chief Ranger of the High Court of California, Independent Order of Foresters, and Dr. Sumner J. Quint of Los Angeles was elected High Physician of the same order.

Dr. L. B. Stookey, Professor of Chemistry and of Physiological Chemistry in the College of Medicine of the University of Southern California, has been testifying as an expert in an important case in Phoenix, Arizona.

Dr. John M. Dunsmoor of the Los Angeles County Hospital was politely relieved of \$6 by three highwaymen about midnight October 12th. They examined his watch but said it did not look good to them and returned it.

Dr. John Hagan and Miss Julia Purcell Murphy, both of Bisbee, were married in Prescott on October 8. The wedding ceremony was in the Catholic Church. Only the immediate relatives and a few intimate friends were present.

The last meeting of the Ventura County Medical Society was held in Oxnard at the residence of the president, Dr. Charles Teubner. Dr. Teubner read a paper on Hydrophobia. After discussion Mrs. Teubner presided over a delightful supper.

Mrs. Charlotte LeMoyne Wills, mother of Dr. LeMoyne Wills, died in Los Angeles Monday, October 7th, aged 84 years. She was a noble, progressive, broad-minded, philanthropic woman and her life was a blessing to the city in which she lived and died.

Dr. C. LeRoy Lowman, who was resident physician in the California Hospital, is now in New York City devoting himself to Corrective Orthopedics. Before returning to Los Angeles Dr. Lowman will spend three months in Boston in the same line of work.

The Los Angeles Medical Association recently elected the following new members: Drs. Chalmer Francis, Josephine A. Jackson, Thomas G. Devitt, E. W. Hanlon, Emma M. Carson, Gertrude C. Seaboldt, Ella E. Huntington, Francis Rollin Percival, H. Wallace Murray, Margaret M. Morris and G. A. Fielding.

In Belgium, in the period of 1890-1900, 44.9 in 1000 births were dead born. Among working people, in industrial centers, the ratio is high. In 1900 in Prussia, out of 1,275,712 births, 39,993 were dead born; in Switzerland in a total of 97,695 births, 3379 were dead born; in France, of 827,297 births, 39,246 were dead born.

Dr. Arthur Beardslee, a graduate of the College of Medicine, U. S. C., class of '07, and later resident physician at the County Hospital, Los Angeles, has accepted the position of assistant chief surgeon of the United Verde Copper Co. at Jerome, Arizona. Another tie between Southern California and Arizona.

J. W. Scantlin, a trapper, died at the County Hospital, Prescott, of hydrophobia on October 10. He was bitten by a skunk August 28, an account of which appeared in the last number of the Practitioner. He neglected to go to the Pasteur Institute at Chicago for treatment as he was urged to do by his physician.

The Benson, Arizona, *Press* says: "Last Tuesday Mr. Cordon of St. David brought a child about three years old to Dr. Morrison, and the doctor extracted between 150 and 200 screw worms from two sores on the head back of one ear. The worms had made a hole from one sore to the other underneath the skin.

The Post-Graduate Medical School of New York recently received a bequest of \$2,000,000. It was, before this gift, one of the richest and best equipped

post-graduate schools in the world. Dr. H. Owen Eversole, College of Medicine of the University of Southern California, class of 1908, is now attending this New York institution.

Dr. Eversole will remain at work in the Post-Graduate until the middle of January when he will go to Johns Hopkins Hospital for three months' practical ward and clinical work. He will then go to London and devote himself for a few months to the study of serum therapy in Wright's laboratory and clinic.

The Santa Ana Hospital Association on October elected the following directors: President, Dr. C. D. Ball; Vice-President, Dr. F. M. Bruner; Secretary, Dr. H. S. Gordon; Treasurer, Dr. T. H. Thomas; Drs. J. L. Dryer, J. R. Medlock, John Wehrly, Wilella Waffle, H. J. Forgy, R. T. Harris and J. M. Raugh.

Dr. Albion W. Hewlett of San Francisco, who graduated from the Johns Hopkins University Medical College class of 1900, and who for the past year has been Professor of Medicine in the Cooper Medical College, has been elected Professor of Internal Medicine in the University of Michigan, succeeding Professor George Dock.

The Tucson (Arizona) Star says:

"About five weeks ago A. R. Eaton was bitten on the ankle by a centipede at Plumed Knight Camp, and for three weeks was under the care of a physician at the home of his uncle, Dr. L. D. Chillson, of this city, and did not get to town any too quickly.

While he was ill, Mrs. Chillson nursed him and dressed the wound. She had a slight abrasion on her thumb and became inoculated with the poison, and for a time it was believed that she would lose her whole hand. For two weeks there was considerable doubt as to whether the hand could be saved and she is now reported to be past the danger point and to have nearly entirely recovered from the wound."

In his opening address before the Southern California Association of Homeopathic Physicians, recently held in Los Angeles, Dr. F. B. Kellogg, president of the association, stated he believed the time was at hand when the two schools of medicine would combine their forces and pull together for the common good of humanity, the barriers between the alopaths and the homeopaths being broken down.

The Arizona Board of Medical Examiners held their regular quarterly examinations at Phoenix October 5 and 6.

Graduates from the following medical colleges took the examination and obtained the following percentages: Jefferson Medical, class 1906, per cent 76.4; University of Southern California, class 1907, per cent 75.5; Northwestern University, Chicago, 1903, per cent 84; Herring Medical, Chicago, 1903, per cent 78.5; National College of P. & S., 1908, per cent 76.3; P. & S., Los Angeles, 1907, per cent 72.9; University of Tennessee, 1907, per cent 74.6; Pulte Medical, Cincinnati, 1901, per cent 68.5. The three last named failed.

Dr. Philip Mills Jones of San Francisco recently delivered a popular address in the Methodist Episcopal Church of Riverside. In the course of his speech he said: "If the United States government would expend the same amount of money in the protection of the health of its people as it spends in investigation of diseases and conditions which affect the health of the hog or steer, it would not be long before contagious diseases and those which are oftimes epidemic would be eradicated from the country.

Prof. Koch spoke to five thousand physicians at the International Tuberculosis Congress on Monday, September 28th. In the course of his address he said: "The tuberculosis situation in Germany has been distinctly favorable during the last three decades.

The rate of mortality due to tuberculosis in Prussia has been reduced one-half. That is equivalent to a gain of 30,000 lives per annum. are active in trying not only to maintain, but increase this diminution. For this purpose many sanitaria have been established, in which 40,000 persons are cared for every year."

The eighteenth annual meeting of the Southern California Homeopathic Medical Society was held in Los Angeles October 13th and 14th. The following officers were elected: Dr. W. E. Nichols, president, vice Dr. Francis B. Kellogg, retired; Dr. W. J. Hawkes, first vice-president, and Dr. Willella Howe Waffle, second vice-president. Dr. H. S Barnard was re-elected secretary and treasurer. The board of censors was also re-elected. The new board of directors is as follows. Drs. Charles Orr of San Bernardino, T. S. Low of Los Angeles, Eliza M. Lewis of Los Angeles, J. P. Hunt of Santa Monica and C. R. Clapp of Los Angeles.

Prof. Irving Fisher of Yale in an address before the recent International Tuberculosis Congress declared that consumption costs the people of the United States more than a billion dollars a year. Prof. Fisher declared that 138,000 persons die of consumption every year. The cost of medical attendance and the loss of earnings before death average at least \$2400, he said, while if to this is added the money that might have been earned with health, the total loss in each case is about \$8000. He pointed out, also, that the disease usually attacks young men and women just at the time when they are beginning to earn money and cuts off their earning power for about three vears on a average, before they die.

Perforative Perotinitis is a valuable brochure by John B. Murphy, M.D., Professor of Surgery, College of Medicine of the Northwestern University, Chicago.

His Imperial Majesty, the Shah of Persia, has conferred the decoration of the Order of the Lion and the Sun upon Frank A. Ruf, president of the Anti-Kamnia Company. Mr. Ruf did not merit this decoration because his tablets assuaged any particular pain of His Imperial Majesty, but because the St. Louisan's fame as a connoisseur of Oriental fabrics, especially Persian rugs. had reached His Majesty's ears. The ceremony of bestowing the decoration took place in the private anteroom in the rear of Mr. Ruf's office-a room whose walls, floors, divans and balustrades are hidden by Persian rugs of exquisite design and color, many of which are hundreds of years old and cost fortunes.

The Maricopa County Medical Society held a very successful meeting at the Ford Hotel, Phoenix, on the evening of October 26. A musical concert and banquet added much to the evening's enjoyment. There was a very large attendance, including two members of the legal profession. The following was the program:

I. Concert program, Elks Theatre Orchestra; piano soloist, Prof. Grunn (of Arizona School of Music); violin soloist, Eugene R. Redewill, leader. March, "The Brookfield," Cohn; overture, "Oberon," Von Weber; Valse, "La Brunette," Severn; Idyl, "The Glow Worme," Lincke.

II. Menu. consomme. overters, fish.

me, in oysters, fish turkey consomme,

II. Menu, consomme, oysters, fish, olives, radishes, celery, roast turkey, steamed potatoes, hot mince pie, fruit, ice cream, small black.

III. Toast, Judge Bullard; intermezzo, "Medicos," E. Redewill, dedicated; selection, "Carman," Biget-Tobani; Parisenne, "La Sarella," Borel-Clerc.

IV. Medical program. "Eclampsia," Dr. F. H. Redewill; "Calmette Reaction," Dr. W. W. Watkins; "Opportune Topics," Dr. Win Wylie; "The Tuberculosis Congress," Dr. J. W. Foss. Topics, after presentation, open for discussion. Presentation of clinical cases. Remarks, Mr. George H. Maxwell, authority on Reclamation work. Finis. mation work. Finis.

The Graphic of Los Angeles says:

"I am so used to the versatility and cleverness of Los Angeles physicians that I can hardly say I was surprised at a recent luncheon, given jointly by the local branches of the Society of Colonial Wars and the Sons of the Revolution. to hear from the lips of Dr. A. S. Lobingier, one of the loftiest and most inspiring responses to the toast "The President," it has been my privilege to listen to in a long time. It was not a set speech, either-there was nothing of formality about the luncheon-but the earnest yet easy utterances of the speaker appealed strongly to my sense of fitness of things. It was over in three minutes, but in that space of time Dr. Lobingier had impressed the score or more of men about him as few threeminute post-prandial talkers are capable of doing. He sat down exactly at the right moment, leaving his thrilled and elevated by his tribute-not to the man, but to the office."

The Pasadena Medical Society was founded in 1888 by thirteen physicians, of whom there are still seven who are members, and of these five attended the anniversary meeting. The charter members present at the twentieth anniversary meeting are Drs. Van Slyck, Rowland, Grinnell, Deacon and Swearingen. During its existence the society has had sixteen presidents, among them being Drs. G. H. Davis, John Q. Adams, who gave his private library to the Pasadena City Library and who is now at the Soldiers' Home at Sawtelle; Van Slyck, Fordyce Grinnell, R. J. Mohr, F. F. Rowland, J. H. Mc-Bride, Henry Sherk, Lockwood, Roberts, A. Fenyes, Hoag and Sherry, who is the present president. During the same period there have been but two secretaries, Dr. F. F. Rowland, who served until 1896, and Dr. J. E. Janes, the present secretary. There are now fifty-nine members of the society.

Dr. Henry Sherry of Pasadena, in the course of an address before the Y. M. C. A., said that there should be legislation against the use of tobacco in any form until after maturity. He said that a man is not matured until he is 25 years old and that he should not use tobacco before he is 30 years of age, as

previous to that it stops the gradual development of bone tissue. He admitted the value of tobacco as a sedative, but said that it should only be used as such after maturity. After a man is 40 years of age, he said, the use of tobacco is of value to prevent tissue change. young men its use stunts growth for that very reason. Dr. Sherry himself passed the forty line a short time ago and we trust that by preventing tissue change as he indicated to the young Christians, together with the judicious use of buttermilk as directed by Metchnikoff-in order to kill off the undesirable citizens of the large intestine-our dear-we do not here refer to the size of his fees, that is another story-doctor may reach a ripe old age.

Dr. W. Jarvis Barlow was awarded a silver medal for the model of his Los Angeles tuberculous sanatorium which he exhibited at the International Congress on Tuberculosis at Washington, and the Washington papers devote considerable space to his model. The Washington Star says: modern construction of the sanatorium cottages permits patients to be under a roof and still be 'out doors,' as three sides of the building are half-screen. The north wall of each cottage is solid, and the bed is placed against it, but all around, south, east and west, is the balm of Southern California, and the delightful atmosphere brought inland from the Pacific makes nights as well as days worth living in-and getting well in. With roses blooming all the year round, with the sun shining every hour of nearly every day, it is a temptation to the huskiest man that ever lived to feign consumption in order to have the privilege of stretching out on a steamer chair in front of one of the cottages."

The French association for the legal protection of workpeople adopted this resolution January 29, 1903:

"That in establishments supervised by factory inspectors the work of pregnant women, or those recently confined, should be regulated as follows: I. Women should not be permitted to work during the two months preceding confinement. 2. Pregnant women should be permitted to ask for cessation of work before their approaching confinement without breaking the work contract. 3. Administrative regulations should determine the different kinds of work which are to be interdicted or permitted only on certain conditions to pregnant women or those recently confined.

"The strict application of a law relating to obligatory rest of pregnant women or those recently confined can be made only when the loss of wages is compensated by relief at the charge of the state or local funds, in the absence of a general system of industrial insurance guaranteeing legal indemnities."

The following rules for pedestrians have been prepared by the automobile editor of Punch:

- 1. No pedestrian shall be permitted to cross a road or street without winding a coach horn, blowing a few notes on a trombone or beating a dinner gong to symbolize his intention.
- 2. At night red lamps must be carried fore and aft and fog signals attached to the boots.
- 3. Every pedestrian must wear a printed placard with full name and address on his or her hat, coat-tails, bonnet or whatnot, for purpose of identification.
- 4. Any perambulist wilfully obstructing motor traffic by impinging upon a car or inserting himself between the wheels or in the gear thereof shall be liable to a fine of 5 guineas over and above the cost of repairs, removal of debris or damage sustained by loss of time or nervous shock to the chauffeur.
- 5. To obviate the risk of punctured tires, no male in spiked shoes, female with hat-pins or person of either sex

with acutely pointed features shall be allowed to cross the road under any pretext whatsoever.

The New York Nation represents the highest standard of journalism, and we gladly present the following taken from its editorial columns:

"Mr. Carnegie's latest benefaction, the pension fund for Scotch heroes, widens somewhat the circle of life-savers privileged to receive a reward. But, if the ironmaster aspires to touch with his bounty every brave soul who delivers others from peril at great personal risk, we fear that he will have to part with all his worldly goods and live in a tub. There are the physicians, for instance: we believe the trustees of the fund have not attempted to honor every man who, for the sake of his fellows, has invited death in bacteriological laboratory and lazar-house. And yet the medical profession harbors the majority of our habitual heroes. Russia's cholera epidemic ought not to be needed to keep this fact alive in our thoughts. Fully conscious of the risks he is incurring, and yet accepting them day in, day out, the physician exhibits courage of a finer type than that of the boy who plunges, without a moment's thought, into the surf to rescue a drowning man, We may admire the boy's act, praise it, and even reward it. But we ought to call it instinct rather than heroism."

Dr. James W. Coleman, Territorial Superintendent of Health, died of tuberculosis at his home in Tucson on Sunday, October 4, after a truly heroic struggle against this dread disease, lasting many years. He was buried at Tucson on Tuesday, October 6, and his remains were followed to the grave by the entire medical profession of his town. The following sketch of his life is from a Tucson daily:

"Dr. J. W. Coleman was born in Clarion county, Pennsylvania, June 11, 1865. He graduated from the State Normal School, receiving a life teacher's certificate. His first independent venture upon the sea of earning his own living was along educational lines, in which he was engaged until 1889. Having determined to adopt the profession of medicine, he entered the Jefferson Medical College of Philadelphia from which he graduated in 1893. practiced medicine in Philadelphia for a few months. He was married to Miss Mary Maddox in Pennsylvania in the spring of 1894, after which he went to Trinidad, Colorado, where he practiced very successfully for four years. He moved to Prescott, Arizona, in February, 1896, and served as physician and surgeon for several large mining companies in Central Arizona for some time. In October, 1900, he located in Jerome, where he established a large and successful practice which he faithfully kept up until his health failed him, when he went to the sanitorium in Monrovia, California, for about six months in 1896. In December, 1906, he moved with his family to Tucson for the benefit of the milder climate here. His health improved for a time, but later it began to fail.

"Dr. Coleman served one year as president of the Territorial Medical Association and for nearly two years past he had held the office of Territorial Superintendent of Public Health, the duties of which he faithfully performed until a couple of days before his death.

"Dr. Coleman was a thorough, conscientious, whole-souled man and doctor. He always thought of caring for his family and his patients before himself. Every person who really knew him loved him and admired him because of his very strong character and generous disposition. He leaves his wife and son Harry, thirteen years old, who will continue to make their home in Tucson."

Coleman was a prince among men and the medical profession of Arizona lost one of its very brightest, most useful and most promising members in his death. Arizona will for many years reap the benefit of his most excellent services as Superintendent of Public Health, performed at a time when the vast majority of men would have long since given up all work.

BOOK REVIEWS

A TEXT-BOOK OF PHYSIOLOGY. For Students and Practitioners. By Geo.ge v. N. Dearborn, A.M. (Harvard). Ph. D., M.D. (Columbia), Professor of Physiology in Tufts College, Medical and Dental Schools, Boston. Octavo, 559 pages, with 390 engravings and 8 colored plates. Cloth, \$3.75 net. Lea & Febiger, Publishers. Philadelphia and New York, 1998.

Dearborn's Physiology is a successful book because it enables the student to carry away clear-cut impressions of the subject matter to be taught. The author has arranged his text in such manner that the student grasps the relation of major to minor function without confusion. This is the purpose and art of teaching and Dearborn has been successful in his effort to present a book

thoroughly up to date and yet logically and clearly arranged and written. The chapters on the nervous system and especially on the mental processes, a subject of great public interest at this time, are particularly good.

THE READY-REFERENCE HANDBOOK OF DISEASES OF THE SKIN. By George Thomas Jackson, M.D., Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. Sixth edition. 12mo., 737 pages, with 99 engravings and 4 plates, in colors, and monochrome. Cloth. \$3.00, net. Lea & Febiger, Publishers, Philadelphia and New York. 1868.

An examination of Jackson's book affords some insight into the reasons for its merited appreciation. The most obvious characteristic is directness. The author clears the ground in his opening sections on Anatomy, Physiology, General Diagnosis and Therapeusis, and disposes of the moot subject of classification and nomenclature in the briefest and clearest way by means of a table, displaying the various diseases arranged in the most rational system, with the prominent primary lesion mentioned. The reader is now qualified to take up skin diseases in any order, and the most natural and practical is according to the alphabet. Herein lies the "Ready Reference" feature embodied in the title. Each disease is considered in full, beginning with synonyms and proceeding through the symptoms to the etiology, pathology and diagnosis, and to especially full sections on treatment covering all varieties and complications. The book is rich in formulas of proved value in this very trying class of cases. Answering the needs of students, as well as physicians, this work has merited the demand for six editions in sixteen years. It is well established in favor and repays it by frequent revisions, enabling its readers always to keep posted to date. Few volumes on diseases of the skin can claim greater popularity.

To the regular practitioner of medicine, this volume is distinguished because of its therapeutic optimism and because of the faith of its author in specific medication as taught in the eclectic system of medicine.

The book is not so extensive as Holt or Rotch. The book is well illustrated and his discussion, particularly of diagnosis and treatment is good. It has an excellent reputation among eclectic practitioners.

ABEL'S LABORATORY HANDBOOK OF BACTERIOLOGY, Translated from the tenth German Edition, By M. H. Gordon, M.A., M.D. Oxen B. Sc., London, Hendy Frawde, Oxfoyd University Press, Laboratory binding. 224 pages.

This pocket-edition laboratory manual is intended as a supplement for lecture and personal instruction. Its merits are its conciseness and reliability. The first German edition appeared in 1898. Since then there has been sufficient call to merit a new edition yearly. The English translators and editors have brought it into thorough accord with the views held by English-speaking races.

QUESTIONS ARIZONA BOARD OF MEDICAL EXAMINERS, OCTOBER 5TH AND 6TH, 1908.

PRACTICE.

- 1. Give differential diagnosis between measles, scarlet fever and smallpox
- Give treatment of acute gastro-intestinal catarrh in children.
- Give predisposing cause and treatment of pulmonary hemorrhage.
- Describe the citology and pathology of typhoid fever.
- Give diagnosis and treatment of pneumonia.
- What is the prognosis as to the cure of epilepsy? Treatment of epilepsy.
- Give treatment of acute bronchitis.
- What are the complications and sequelae of searlet fever? Give varieties of crysipelas with treat-
- ment
- 10. Give treatment of asthma,

MATERIA MEDICA.

1. Explain the distinction between the physiological action and the therapeutic use of drugs. Between rational and empirical therapeutics.

- What vatios do hypodermic and rectal dosage bear to that by the Give rule for children's dosage.
- What are alkaloids? Give the four official alkaloids of cinchona bark.
- Give a safe and efficient dose for an adult of morphia sulphate; strychnia sulphate; cocaine hydrobromide; hyoscine hydrobromate; tr. digitalis tr, aconite.
- 5. Give the active principles of digitalis. Give the indications and contra-indica-tions for the use of the drug in discases of the heart.
- Name five potassium salts used in medicine. State dose. Give source and action of ergot.
- Name some of the chief alkaloids of opium and state the therapeutic differ-ences in the use of opium and morphine.
- What hypnotic should be avoided if patient has a weak heart?
- What anesthetic do you use and why do you prefer it?

SURGERY.

- What is the point of election for ligation of the subclavian artery? Describe of the subclavian artery? fully the technique.
- ive differential diagnosis of osteosar-coma and tubercular knee joint. Give
- Differential diagnosis of renal and cystic calculi. Give treatment of each.

 How does the Halstead differ from the
- Bassini operation for inguinal hernia? Symptoms, diagnosis and treatment of prostatic hypertrophy.
- Etiology, diagnosis and treatment of fis-tula in ano.
- Diagnosis and treatment of embolism of
- the mesenteric vessels.

 Diagnosis and treatment of ulcerative perforation of the intestines.
- Describe minutely the enucleation of the eye.

 Differential diagnosis and operation for
- and treatment of hydrothorax and pyothorax.

ANATOMY.

- Give a description of the general lymphatic system.
- Give the histology of compact bone. Give the structure of the spinal cord. Name the muscles of the back, grouping them in their different layers.
- Give the origin, insertion, action, blood and nerve supply of the following mus-Occipito-frontalis, pectoralismajor deltoid, adductor-longus, rectus abdominis, sternomastoid.
- Name the lobes and fissures of the brain.
- Describe the peritoneum.
- Name what anatomical structures are derived from the epiblast, mesoblast, hypoblast.
- Give the gross and minute anatomy of the kidney.
- Describe the brachial plexus and give its distribution.

PHYSIOLOGY.

- Upon what theory is physiology founded? What is the structural basis of all organisms?
- Life is in its ultimate analysis the metabolism of plasm; define plasm and metabolism. Give chemical constituents of plasm.
- Lymph: Where elaborated; how con-
- veyed; composition and function. Give source and function of Adrenalin,
- Thyraden and Opsonin. Describe the local peculiarities of the circulation of the blood in the brain, lungs, liver and erectile organs.
- live mechanism of respiratory move-ments. Ratio of respiration to pulse. Effects of atmospheric pressure on respiration. Influence of respiratory movements on heart and circulation of
- the blood and lymph.

 Give the source and action of the various secretions concerned in the process of digestion.
- Where are the following centers: (a)
 Parturition? (b) Auditory? (c) Respiratory? (d) Visual? (e) Micturation?
 Define: (a) Amnion, (b) Corpus lutum.
 (c) Leucin, (d) Erythrocyte, (e) Neuron.
- (f) Hemolysin.
- Distinguish between cerebral and spinal paralysis in: (a) Muscle-tonus. (b) Nutrition of muscles. (c) Electrical reactions of muscles.

OBSTETRICS.

- 1. Describe the changes that take place in the mucous lining of the uterus pre-paring it for the reception of the fer-tilized ovum. If it becomes attached what further changes take place? If it passes without becoming attached what further changes?
- Describe the conditions most likely to result in laceration of the cervix and perineum and what remedies would you use and what treatment would you employ to reduce the danger as much as possible?
- Describe fully how you would conduct a face presentation.
- Describe how you would conduct a breech presentation to decrease the danger to both mother and child as much as pos-
- Classify, give symptoms and treatment of extrauterine pregnancy.
- Give classifications, symptoms and treatment of placenta previa.

 Give technique of obstetric asepsis and
- antisepsis during pregnancy, parturition and the puerperum.
- Mention four important causes of active uterine contractions of normal labor.
- Give the cause and treatment of puerperal sepsis.
- fore the three important diameters of foetal head at term. The diameters of normal female pelvis.

GYNECOLOGY.

- 1. What are the most common causes of pelvic cellulitis?
- State how chronic perulent salpingitis may cause sterility.
- Give differential diagnosis between acute
- non-puerperal ovaritis and appendicitis. Describe urethral caruncle and give Describe treatment.
- When is ventral fixation contraindicated? What is vaginismus? Give its cause and
- Give treatment in detail of retroversion of less than one year's standing. Explain how fibroid tumors may cause
- when would you perform trachelorraphy and when amputation of cervix in cer-vical lacerations? Give technic of trachelorraphy.
- What is the cause of chronic inflammation of Skene's glands? Give treatment.

PATHOLOGY.

- In what diseases does hypertrophy of the heart most commonly result? Why? What are the commonest underlying con-
- ditions in angina pectoris?
- What are the microscopic characteristics of the exudate in croupous pneumonia?
- In catarrhal pneumonia? What pathologic conditions are produc-tive of icterus?
- Differentiate, pathologically, between typhoid ulcer and a tuberculous ulcer of the intestine.
- Give the usual methods of metastatic extension of carcinoma and of sarcoma. In what locations in the body is the ty-
- phoid bacillus found in typhoid fever? Describe briefly lesions in the cord in
- lesions in the cord in tabes dorsal.s.
- What is pathological leucocytosis?

CHEMISTRY.

(Please back your papers with your name, address, subject, college and date of graduation. Also fold with your papers the list of questions handed you.)

- 1. Define decomposition. Name three physical decomposing agents,
- Sulphur. (a) Occurrence in nature. (b)
 Physical and chemical properties, (c)
 What compound of sulphur is liberated in decomposing organic matter?
- 3. Give chemical formula for: (a) Hydrochloric acid. (b) Sulphuric acid. (c) Epsom salts. (d) Rochelle salts. (e) Glawber salts.
- 4. What is an alkaloid? Name five important ones and give derivation of same.
- 5. What are ptomaines? Give usual symptoms present in ptomaine poisoning.
- Name the general properties of carbohydrates and mention the occurrences in nature.
- 7. Describe in detail: (a) A chemical test for blood. (b) Pus in urine, (c) What urinary test is considered most important from a diagnostic and prognostic standpoint in pulmonary tuberculosis? (d) How may the amount of total solids passed in the urine in twenty-four hours be approximated? (e) How many grains of total solids should a man weighing 160 pounds pass in twenty-four hours? (f) Give normal sp. gr. of human urine. (g) Give test for albumen in urine. (h) For sugar in urine. (i) What is the normal amount of urea passed by man in twenty-four hours and give a method of estimating the amount excreted.
- (a) Name a test by which arsenic may be detected with certainty. (b) Give antidote for arsenic poisoning.
- Name some drugs which combined in a prescription would be chemically incompatible, Give chemical formulae.
- 10. Give chemistry of pancreatic ferment in digestion.

CALIFORNIA HOSPITAL ALUMNAE NOTES

Mrs. Ensign has gone to El Paso with a patient.

Miss Elizabeth Barbour has been quite ill with scarlet fever.

Miss Barna and Miss Cresse are at the Ventura Hospital on special cases.

Our sympathy goes out to Miss Estelle Corbett in the recent loss of her mother.

Miss Eva Johnson returned from her visit to Ohio and other Eastern points about September 1st.

Miss Katherine Moore is at Terminal Island, where she is caring for her mother, who is quite ill.

Miss Mary Newkirk has gone into private work after two years as one of the head nurses in the California Hospital.

Miss Lillian Simpson, who has been in Boston for several months with a patient, arrived in Los Angeles on September 12th.

Miss Alma Hilton Green, class of '03, was married August 17th to Mr. Victor A. Watkins, a prominent young attorney of this city.

Miss Jantzen (class of '07), who has had charge of the obstetrical ward in the California Hospital, resigned to take up private work.

Miss Olive E. Widener (class of '05) was married Saturday, August 21st, to Mr. B. G. Rounsefell. Mr. and Mrs. Rounsefell will make their home in this city.

Mrs. Constance Harshaw Wilson, class of '03, who has recently returned from a trip to Japan, has accepted the position of superintendent of a new hospital in Oxnard. Dr. Livingston. Dr. Potts and other of the Oxnard physicians are interested in the new enterprise.

The regular monthly meeting of the California Hospital Alumnæ was held in the Nurses' Home, Monday, September 7th, Miss Johnson, the president, being in the chair. After the business was finished a most interesting paper was read by Miss Gertrude Tucker, who is now doing clinical work at the Free Dispensary in the University of California Medical College, and also

settlement work. The "Record Sheet" was read by Mrs. E. R. Durbin.

Miss Elizabeth Hogue of class of '03, formerly superintendent of the Guild Hospital, Palo Alto, resigned that position recently to organize a new hospital company. This will be called the "Peninsula Hospital Company," and is

composed of a number of the leading physicians of that city. The new hospital will have a training school and every modern equipment. It will be in running order in about two months. Miss Hogue is to be congratulated upon the accomplishment of this large undertaking.

CALIFORNIA STATE BOARD OF MEDICAL EXAMINERS.

The best way to strengthen our State Board is to see that the examinations are free from all suspicion of unfairness. Owing to the many complaints of partiality and error in the August examinations the State Board had a special meeting in Los Angeles October 24. The Los Angeles Times has the following report:

"By the decision of the State Board of Medical Examiners, yesterday, Dr. J. Park Dougall, its president, was censured for acts of familiarity with applicants, and for lecturing at 'quizzes,' and a review of the papers of sixty-seven applicants who failed at the August examination is ordered. The meeting was held in a classroom at the State Normal School, and the eleven members of the board were present.

"The meeting was secret, and at its conclusion Secretary Tisdale and the out-of-town members fled precipitately, as they announced, to 'catch a boat.' The secretary carried a large bundle under his arm. It contained all the affidavits concerning the examination of last August, the charges against President Dougall, and all other documents except the stenographic notes of the shorthand reporter who took down oral evidence.

"Secretary Tisdale explained that the matter of giving out news of the meeting had been placed in charge of Dr. L. D. Tasker, a Los Angeles member of the board.

"The meeting began in the morning, and did not adjourn until 7 o'clock in the evening. It was called especially to hear the charges against Dr. Saxton T. Pope of Watsonville, Dr. J. Park Dougall of Los Angeles, Dr. George F. Rhinehardt of Berkeley and Secretary Tisdale of Alameda.

"In support of the charges, affidavits were submitted by Drs. J. R. Renacker, W. R. Tyler, A. H. Jackson and C. D. Hubbard of Los Angeles, and Dr. C. H. Knox of Colton. All were applicants who claimed to have been 'flunked' at the examination, except Dr. Hubbard, who passed. The affidavits were secured by Guy Barham, whose brother, Frank, was among the disappointed ones.

"After these were read, the doctors named (doctors still, though without licenses) were orally examined, and obligated to secrecy by the board.

CHARGES IN BRIEF,

"The charges, in brief, were that Dr. Pope, while in charge of the examination in pathology at Cooper Medical Institute, San Francisco, in August, permitted students of that institution to have access to the laboratory and to examine specimens about which they were being examined, and that examination questions given to Dr. Pope by Dr. Rhinehardt had reached Cooper applicants before the proper time.

"There was a general charge that there was collusion between Secretary Tisdale of the board and the watchers named for the examination, by which Cooper students were made watchers and gave their comrades help.

"The charges against Dr. Dougall, president of the board, were that he had lectured at 'quizzes' conducted by his office partner, Dr. D. D. Nyce, and by Dr. H. V. Brown, and that he had done things that led applicants who took the 'quizzes' to believe they would have advantages through him.

"The charge that the markings were made for the purpose of 'flunking' applicants from the Southern California schools was not specific, but was embodied in the affidavits. Just what the latter contained is not known, as there was no opportunity given to examine them, and Dr. Tasker, who gave out the results of the meeting, was not familiar with them.

"Witnesses examined in defense on the various charges were Drs. Dougall, Nyce, Brown and A. H. Winter, for Dr. Dougall, and Dr. Tisdale for himself.

"Toward the close of the session Dr. Dougall was out of the room about an hour while his colleagues debated his case. What form the discussion took is not known, but just before adjournment he was called in and the resolution adopted during his absence was read to him. He responded with a statement that his zeal in the interest of applicants had perhaps led him into acts that were misunderstood and that he had intended only to help in an honorable manner. He did not say he would resign and the board did not ask him to.

"The resolution concerning him is as follows: "The charges against Dr. Dougall, as set forth in the affidavits and testimony of witnesses, were met by affidavits and testimony of witnesses of equal credibility. Apparent discrepancies in the testimony of the two sides

may be explained by misinterpretation of circumstances which actually occurred. Although we censure him for his acts of familiarity toward applicants for examination, and we further censure him for addressing the "quiz" class of Drs. Nyce and Brown,

"'Resolved, that we hold him free of any criminal intent.'

"Dr. Tasker said the board found no cause of reproach as regards the 'quizzes' themselves, but found fault only with the relation of Dr. Dougall to them.

REVIEW RESOLUTION.

"The decision to review the papers of candidates who did not pass was reached before the action was taken on the present. The purpose of the board was expressed as follows:

"'Resolved, that, owing to the apparent irregularities in the last examination, we hereby agree to review all the papers of that examination and make such corrections as in our opinion will establish a just marking, the review to be conducted by a committee named by the president.'

"This committee includes Drs. G. F. Rhinehardt of Berkeley, Ernest Sisson of Oakland and Lincoln C. Cothram of San Jose. As they must visit San Francisco and go through more than 700 examination papers, the time for a report was not fixed. The committee, Dr. Tasker said, would begin its work without delay.

"That the charge of collusion between watchers and candidates was established by the testimony was admitted by Dr. Tasker, who said this was one of the reasons why the review of the papers was ordered. It was shown that Dr. Rhinehardt gave his examination papers to Dr. Pope, who gave them to the watchers. Either through confusion or collusion, applicants got these questions before the examination began. The board did not determine just how this happened but Dr. Pope and Dr. Rhine-

hardt were exonerated from all blame.

"It was also shown that seniors of the Cooper school were used as watchers, but Dr. Tisdale explained this by saying that at the last minute it was found additional watchers were required, and the most accessible were chosen—that he did not know they were Cooper seniors until the examinations were well under way. Then he spoke to members of the board, who said they saw nothing reprehensible about it.

"The president, to show that there had been no discrimination against the Southern California applicants, read a comparison of twenty-seven students from Cooper and the University of California and an equal number from the Southern California Medical School and the College of Physicians and Surgeons. This indicated that, in bacteriology and pathology—the subjects complained of—Southern California applicants were marked 4060 points and those of the northern schools 3997 points. This, he thought, disproved the allegation of flunking' because of geographical differences.

"Dr. Nyce, in his testimony, showed that, by following the course of previous examinations, he had anticipated 85 per cent. of the questions asked by the board's examiners.

"Dr. Barnard admitted that many of these questions are technical and that the process of cramming lets many an applicant pass who is not as well qualified as some who may fail. He thinks the examination would be better if it were written, oral and demonstrative in the hospital.

"It is likely the result of the review will not be known until the semi-annual examination is held in Los Angeles, early in December."

The Examiner of October 25 contains the following report, and also has pictures of J. Park Dougall, the Eclectic member and president of the board, and Dr. Charles L. Tisdale, the Homeo-

pathic member and secretary of the board:

"The forty-seven Southern California medical students who failed to pass, they charged, through favoritism and frauds practiced at the examinations for State licenses last August, won their two months' fight for a reconsideration yesterday.

"The State Board of Medical Examiners, after a nine-hour secret session, which ended at 7 o'clock last night, announced that the papers of all unsuccessful candidates would be reviewed.

"This was the result of the testimony of twelve students, whose charges that the markings were inaccurate, and that they were the victims of discriminations which permitted favored applicants to 'crib' and 'book,' were supported by the affidavits of a score more, including men who passed the examinations, as well as those who failed.

"In addition, Dr. J. Park Dougall, president of the board, against whom the most serious charges were leveled, was censured in a special resolution 'for his acts of familiarity toward applicants for examination, and for addressing the "quiz" course of Drs. Nice and Brown,' whose offices adjoin those of Dr. Dougall in the Douglas Building, and from whom they purchased the 'quiz' course. Dr. Dougall, however, is specifically exonerated 'of all criminal intent,' and in thanking the board for its finding, he said last night that while he may have been indiscreet, his intentions were the best.

"The resolution of censure was given out, with another prescribing a committee of three for the review, in a statement issued by Drs. L. D. Tasker and Frank S. Barnard, the Los Angeles members of the board, who declared that the examinations imposed upon applicants for license to practice in California were not practical at all, and admitted that in all probability some of the most eminent surgeons and medical

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scientists in the world would have been perplexed by the questions propounded by the examiners last August.

"Dr. Tasker also stated that the board recognized as proved the allegations made by the students that there was collusion between the watchers employed by the board and the candidates from Cooper Medical College, San Francisco, by which the latter were able to 'crib' their answers and pass successfully.

"The resolution censuring Dr. Dougali is as follows:

"'The charges against Dr. Dougall, as set forth in affidavits and the testimony of witnesses, were met by affidavits and testimony of witnesses of equal credibility. The apparent discrepancies in the testimony of the two sides may be explained by misinterpretation of circumstances which actually occurred, although we censure him for his acts of familiarity toward candidates for examination, and we further censure him for addressing the 'quiz' course of Drs. Nice and Brown. Therefore, be it

"'Resolved, That we hold him free of any criminal intent."

"Dr. Dougall was accused in the affidavits and testimony submitted by the students of having first recommended the Nice-Brown 'quiz' course, and of then appearing as a lecturer before it, a circumstance which gave the impression that, some of the students maintained, was supported by Dougall's own statement that if they entered the course at \$100 each they could not fail. The head of the board also was accused of having shown special favors to the Cooper students and others who passed.

"Dr. Dougall refused a statement and hurried away when the session adjourned last night, but according to the formal statement issued by Dr. Tasker, who was delegated to make same by Secretary Charles L. Tisdale, who also was in a hurry to catch a train back to Alameda, he is credited with this explanation:

"'My appearance before the 'quiz' course may have been indiscreet. I may have been rather careless also in speaking to students up for examination. But there was no wrong in my intent. I have been through the ordeal of a California medical examination myself, and whatever I may have done that lays me open in any way to censure, was due to my sympathy for the men who had to undergo the same trial, with its racking anxieties and hopes and fears.'

"Dr. Dougall's witnesses were Drs. D. D. Nice and H. B. Brown, the conductors of the 'quiz' course, and Dr. R. M. Winters, who was one of the watchers selected by Dougall. The 'quiz' course men declared that although the complaining students were right in saying that he appeared as a lecturer three times before them, they were wrong in declaring that there was a guarantee with his recommendation of their course that all who took it would pass.

"Dr. Winters was present to rebut testimony that the president of the board had personally assured candidates during the examinations that they would pass. His affidavit was to the effect that casual remarks were misconstrued, and the board took this view.

"The second end, from the view point of the unsuccessful applicants, the most important resolution—the one ordering the review—is as follows:

"Resolved, That owing to the apparent irregularity of the last examination, we hereby agree to review all the papers of the examination, and make such corrections as will, in our opinion, establish a just marking, the review to

be conducted by a committee of three appointed by the president.'

"Just before the meeting closed Dr. Dougall named Dr. George F. Rhinehart of Berkeley, Dr. Ernest Sission of Oakland and Dr. Lincoln C. Cothran of San Jose to revise the markings.

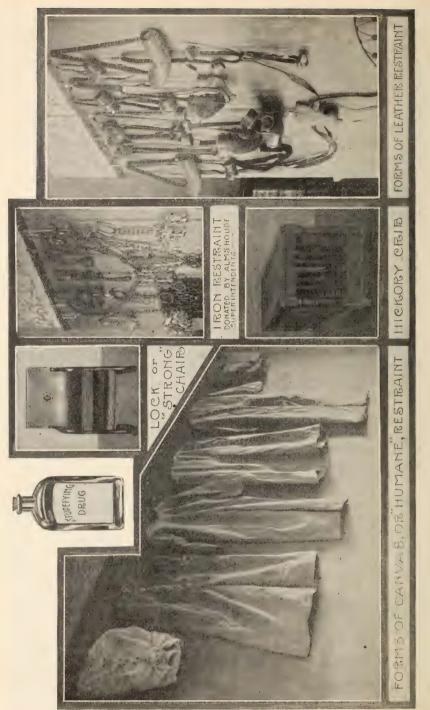
"Dr. Dougall, though the only one censured, was not the only one against whom charges were made. Dr. Tisdale, Dr. Saxton T. Pope of Watsonville, and Dr. J. W. James of Sacramento also were accused, although in the case of the latter the students averred that his offense was asking questions designed solely to catch the men under examination, and this allegation was supported by Dr. Barnard and Dr. Tasker last night. Both asserted that the James questions could not be answered by even one in ten instructors in medical colleges.

"The board exonerated both Tisdale and Pope. Tisdale, it was alleged, appointed as watchers the Cooper medical students, whom the board last night officially declared were in collusion to assure the success of their colleagues. The charge against Dr. Pope was that he distributed question papers in time to permit the Cooper students to take them out to lunch and find the correct answers. This charge involved Dr. Rhinehart. It was his list of questions in hygiene that were distributed. Pope said that while there undoubtedly was a leak, he was not culpable, having simply made a mistake. He thought that Rhinehart's examination would immediately follow his own, whereas it was set for I o'clock, an hour later.

"The session started at 10 o'clock yesterday morning. When the board was called to order it decided to proceed with the secrecy of a grand jury. Each witness was called in alone, and pledged not to divulge anything he might hear.

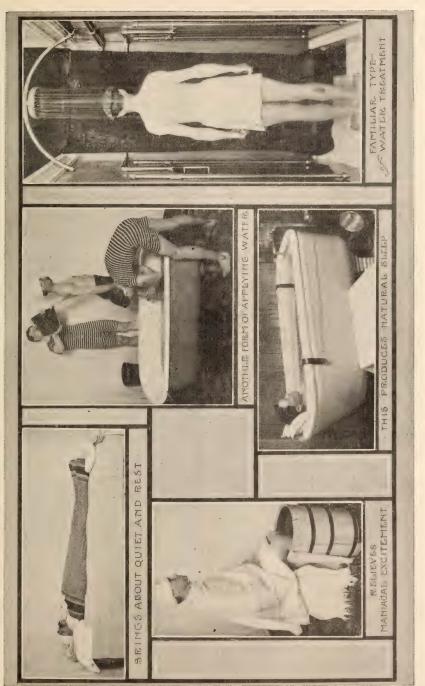
"Guy Barham, whose brother, Frank, was among those who failed, and who has been occupied since the first of Sep-

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tember in gathering affidavits to support the charges of favoritism and fraud, was the first to go into the assembly room of the State Normal School, where the session was held. He had a package of affidavits that would have filled a large file-box.

"On the porch outside were several young students and elderly doctors from other States who sought the right to practice here. Each of these had an affidavit in the packet Barham carried, and each was cross-examined by the board on the accuracy of their written testimony. It was a test of memory. But the main charges—that there was collusion in favor of Cooper Medical College students; that 'booking' was allowed; that question papers were peddled, and the final markings, which caused 52 per cent. of the candidates to fail, were incorrect—were substantiated.

"'The board recognized that there was collusion,' said Dr. Tasker. "That was the basis for the decision to order a review."

"'The examinations prescribed by the State law fall far short of their object,' said Dr. Barnard, commenting afterward upon the test which must now be reconsidered. 'They cannot be practical. Instead they are highly technical, and are becoming more so each year.'

"'Then isn't the object of the law defeated?' he was asked.

"'Of course. If they were not technical there would be no need of the 'quiz' courses which have caused some of this trouble. But they must be written—therefore technical.

"'If they could be made practical—or if we could take an applicant to a hospital and test him in actual practice in diagnosing diseases—there would be none of this trouble.'

"Dr. Barnard and Dr. Tasker said that the board at its next meeting, which will be held here in December, would probably discuss an amendment, under which it would be possible to employ actual hospital tests. This they said would demonstrate a physician's actual ability and not the book crammer's knowledge of text books."

The Examiner of October 26, in summing up the results of the meeting, said:

"Dr. Dougall was exonerated of all criminal intent, but he was censured by the board for having first recommended a 'quiz' course—which members of the board said would be unnecessary if the examinations were not technical—and of having afterward appeared as a lecturer before the students who accepted his advice and paid \$100 each, under the impression that this would assure their success in the examination by the Board of Examiners.

"Collusion between the watchers and the students from Cooper Medical College likewise was established. The board admitted this in the statement issued by Dr. Tasker. Dr. Tisdale, who was accused of having employed the watchers who aided the Cooper students, demonstrated to the satisfaction of the board that he was the victim of a plot between the undergraduates of Cooper, who acted as watchers, and the men under examination.

"Dr. Saxton Pope, who comes from Watsonville, was held responsible by the complaining students for the 'leak' by which the Cooper candidates procured some of the question papers, took them out to lunch and procured the correct answers. Dr. Pope said there was a leak, but that it was due solely to his mistake in time, believing that the examination was to take place before the lunch hour."

Most of us try to forget the mean things we know about ourselves.

Enough is as good as a feast, but the average man wants a surplus.

Clothes don't make the man. Many a fellow with a coat-of-arms wears baggy trousers.

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DEATH OF DR. J. F. KENNEDY.

The Iowa Health Bulletin for October contains the following: In memoriam, Josiah Forrest Kennedy, A.M., M.D., born January 31, 1834, died September 26, 1908. Dr. Josiah Forrest Kennedy died at his home in Los Angeles, California. He was born near Landesburg, Pennsylvania, where his early life was spent. He was educated at Williamsburg Academy and Dickinson College and graduated from the Medical Department of the University of New York City in 1858. The same year he settled at Tipton, Iowa, where he commenced the practice of medicine. In 1861 he was made an assistant surgeon in the army, being stationed at Georgetown, D. C., and for two weeks was in charge of the wounded from Antietam. His commission was signed by Lincoln and Cameron. He resigned from the army October, 1862, and returned to Tipton, Iowa.

In 1869 he was elected professor of obstetrics in the Medical Department of the Iowa State University. In 1884 he was elected Secretary of the Iowa State Board of Health, and served with great fidelity and efficiency for the period of twenty-two years. In February, 1907, he moved to Los Angeles, California.

For many years he was an active member of both the Polk County and the Iowa State Medical Associations and had held various important offices in National Medical and Benevolent Societies.

His courteous manner and conscientious devotion to duty endeared him to his many associates and colleagues, as well as to his professional patrons by whom he was greatly beloved for his tender and successful professional ministrations.

Interment was made at Los Angeles, California.

THERAPEUTICAL HINTS

SAFE ANTISEPTICS IN GONORRHEA.—Tincture of iodine irrigations in solution of from one to four drachms to a quart of hot water is said to be one of the safest and best antiseptics that can be used in gonorrhea. The strength of the solution and number of irrigations a day depends upon the stage of the disease. To keep the urine bland and non-irritating Sanmetto should be administered in teaspoonful doses three or four times daily throughout the treatment. In case of extreme acidity of the urine one of the potassium salts will be found helpful.

A new hypnotic has been introduced by the Schering Chemical Works, the same being the monosodium salt of diethyl-barbituric acid named Medinal. From the enclosed pamphlet you will see that it is superior to diethyl-barbituric-acid by its far greater solubility, by reason of which it is rapidly absorbed and excreted. It therefore has prompt and reliable soporific effects with freedom from cumulative toxic actions. By virtue of its water solubility, it can also be used rectally and subcutaneously. Subcutaneous injections of Medinal are recommended by Steinitz in morphine habit treatment, in threatening delirium tremens and in the very acute cases of insomnia.

If in the next case of dysmenorrhea, you will at least give Hayden's Viburnum Compound a trial, administering it a few days prior and during the menstrual period, we are confident that your patient will experience the same beneficial result as has been the case during the many years Hayden's Viburnum Compound has been before the profession.

In amenorrhea, menorrhagia metrorrhagia, Havden's Viburnum Compound has proven of unquestionable value, and as its reputation has been built up and maintained solely upon its merits as a reliable remedy in the treatment of diseases of women, we are confident that if you will use it in your next case, you will be as well satisfied as have been those who have for years placed their dependence upon it. Owing to the popularity of Hayden's Viburnum Compound and its large sale, it is extensively imitated by other manufacturers. To assure satisfactory beneficial results, the original H. V. C. should only be administered. We would be glad to send samples and literature upon request. New York Pharmaceutical Co., Bedford Springs, Bedford, Mass.

In an address delivered April 26, 1905, before the Danbury Medical Society on "The Practical Value of Old Remedies," John V. Shoemaker, M.D., L.L.D., of the Medico-Chirurgical College, Philadelphia, Pa., spoke of Hamamelis in the following terms:

"Hamamelis Virginica, an excellent o'd-time remedy, has a well-defined range of usefulness within which it is without a rival. Externally and internally, it is sedative and astringent. It is used as lotion and ointment in many diseases and injuries of the skin, in leg ulcer and varicose veins. It is serviceable in acute and chronic diarrhoea, internal hemorrhages, bronchorrhea, epistaxis (nose bleed) and varicose ulcers, etc."

This statement from noted authority concerning the usefulness of Hamamelis is well borne out in general clinical experience, provided always that a uniform, active product—such as is found in Pond's Extract—be employed.



Vol. XXIII.

Los Angeles, December, 1908.

No. 12.

DR. WALTER LINDLEY, Editor.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN, Assistant Editors.

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW, Associate Editors.

THE SIXTH INTERNATIONAL CONGRESS OF TUBERCU-LOSIS.*

BY C. E. YOUNT, M.D., PRESCOTT, DELEGATE FROM ARIZONA.

Armies may come and go, nations may rise and fall, but for generations to conce the international army engaged in its struggle against tuberculosis will have innumerable battles to fight. As is the case in no other war, we have now a mighty international army, its legions on every continent. Even the isles of the sea send their cohorts.

Tuberculosis is a very ancient enemy of mankind. To prove my statement. may I quote from history men whose names are familiar to every high school boy? In the fifth century B. C., Hippocrates announced that "Phthisis (consumption) taken early can be cured." Aristotle, a century later, notes that. "The Greeks believed it to be contagious." (If the Greeks could have coupled this belief with a twentieth century organization against tuberculosis, this day and generation would not be engaged in its present struggle.) Celsus, in the first century B. C., recommends "Change of climate, and especially life at sea." (This statement is

something of a surprise to our profession as we have come to think that the "change of climate" idea originated with this generation.) Galen, eighteen hundred years ago, looking forward through the centuries beheld his ideal in the *Arizona* of today, when he advised "A dry hill climate."

If then, tuberculosis be proven to have been an ancient scourge of mankind, why this sudden, or I might say, nineteenth and twentieth century attack of the "allied forces" upon it? The ancients were warned against its probable contagiousness. France, in the early days, by proper isolation of cases in pavilions or hospitals, well nigh rid herself of tuberculosis, but, as is often the case, reposing in a state of overconfidence, she began to be remiss in caring for her tubercular, and today is as sorely decimated as the rest of the world. "Wars, smallpox, yellow fever, plague, railroad accidents, disasters; these cause momentary outbursts of great excitement and fear, even heavy

^{*}Read, by invitation, before the pupils of the Present Schools, November 39, 1998.

mortality, but this mortality is small as compared to this silent, ever present foe, tuberculosis, which so stealthily and yet so unceasingly lies in wait for its victims." (J. H. Bulletin.)

A friend, a relative, the victim of tuberculosis; a death here and there from the same cause, made little impression upon the public mind. It is to the value of the collection and publication of vital statistics, that we owe this awakening of the nations of the world to their peril from the "Great White Plague." Let me illustrate. It is fortyseven years since the War of the Rebellion began, yet there are few present in this hall tonight who have not known directly, or indirectly, of the sorrow of these four years of war. We are apt to look upon those deaths as appalling in number, an unnecessary sacrifice of human life. During the entire four years' struggle the whole number of deaths from all causes, and on both sides, was about 500,000; a mighty human sacrifice to "Cause and Country," a sacrifice which left as its immediate legacy widows and orphans, with little or no provision for future needs; sorrowing parents, brothers and sisters, and an economic burden which this country has not yet discharged, nor can discharge! Let me tell you, friends, that the mortality of that great national calamity becomes insignificant when compared with the workings of "The Silent Reaper," during the last four years, through his field marshal, tuberculosis.

Six hundred and twelve thousand, the estimated deaths from tuberculosis in the United States during the four years just past; as against five hundred and five thousand estimated deaths on both sides during our four years of civil strife. If then, during each four years of our national life we lose one hundred thousand more lives than were lost during the trying period of the Civil War, is it not time that we pause in our

mad rush of "progress," and study our vital statistics, and having discovered the shocking death rate from tuberculosis, seek the remedy? One hundred and fifty-three thousand lives in this country annually sacrificed before the Juggernaut, tuberculosis! What is true of our country is true in a measure of the nations of the earth. I repeat, the collection of vital statistics, their publication, and finally a discriminating study of the causes of death among mankind, has fixed the attention of the world upon tuberculosis, and being a preventable disease, the cause of unnecessary sacrifice of life, happiness, and money, the nations have united as a mighty host to conquer this destroyer.

The International Congress on Tuberculosis, which meets tri-ennially, then is but the Council of War of the great leaders in this crusade. "Each Congress marks, as it were, a stage of progress in the work. We have the period in which Brehmer, Detweiler and others demonstrated the efficiency of the open air treatment of early tuberculosis in specially constructed sanitoria. Then the period (1882) following Koch's discovery of the specific cause of tuber-At another Congress Koch advocated tuberculin as a curative agent, and in the period following, the substance was the all-absorbing subject of investigation and discussion. In 1901 Koch made the assertion that the tuberculosis of cattle was to be considered of little or no importance as a factor in the production of the disease in the human race. In the period since, this question has largely occupied the minds of investigators. In all these periods progress has been making in many correlative branches, and at the various congresses there has been a form of "rounding up" and taking of stock, so to say, of our knowledge as to the whole range of subjects embraced in the study of the disease, in its physical and bacterial nature, its source, and means of

transmission, prevention and cure" (J. H. Bulletin).

I have kept you waiting some time for the real theme of this discourse, which is the Sixth International Congress on Tuberculosis held in Washington, D. C., September 21st to October 12th, 1908. This congress was held under the auspices of the National Association for the study and prevention of tuberculosis with the United States government acting as host, President Roosevelt being the honorary president of the congress, with practically all the governors of the States as vice-presidents. The United States Senate and House of Representatives passed a resolution inviting the nations of the world to participate, then appropriated \$25,000 for exhibits from the hospitals and sanitoria under the Army, Navy and Marine Hospital service, and later \$40,000 for the temporary completion of the unfinished National Museum, in which to house this great gathering and the exhibit. To this congress nearly every nation sent its representatives. away China and Japan, Chili and Argentine Republic, all the great nations of Continental Europe, were there to give and receive instruction.

This congress may be best studied in its two divisions: First, the exhibit or great didactic method of instruction, whereby the school-boy or college graduate could quickly grasp the most abstruse truth from chart, model or photograph. Second, the meetings of the sections, seven in number, like the "seven ages of man" covering the field of tuberculosis from the cradle to the grave, in the discussion of some four hundred papers presented by the master minds of the world who are devoting their energies to the conquest of tuberculosis.

Among the many beautiful public buildings in our nation's capital none seemed more suitable to the needs of this congress than the majestic marble structure in course of building, known as the New National Museum. Its spotless walls of white rise as a huge monument, a triumphal arch, so to speak, through which this conquering army of scientists marched, whose very corridors rang with their notes of optimism!

The tuberculosis exhibit was formally opened, Monday night, September 21st, Commissioner Henry B. Macfarland, representing the District of Columbia, presiding. "When he welcomed the delegates and visitors to the congress he called together one of the most notable groups of scientists in the world. For three weeks the public of Washington and the little army of visitors who were here for the congress were to be given the benefit of years of study and research. They were to see as clearly what had been done in the innermost sections of foreign countries as right there in Washington, and a visit to the exhibits was to get first hand knowledge of every known preventive, and every known remedy which has been disclosed to the world." (Wash. Herald.)

I desire to quote from a few of the addresses made on that memorable evening, before an audience of over 4,000 persons who crowded to the very walls all the available space in the large auditorium. With the U.S. Marine Band to intersperse the addresses we were doubly enthused, and were resolved for greater things, as an army on the battlefield is cheered by martial music. his address of welcome Commissioner Macfarland said among other things, "We rejoice with you in every triumph over the common enemy which you have to report, and in every weapon which has helped to victory. We especially value the demonstrations of what fresh air and sunlight have done in fighting the great white plague. . . . We are thankful for the noble men and women who have given their time and money in this great cause."

The United States government had as

its representative at the opening of the congress, Secretary of Agriculture James S. Wilson, a veteran in his service to country and a tower of strength to this nation through his efforts to secure for us foods untainted by disease or chemical preservation. Would that his high standards for inspection and inspectors might receive always the hearty support of the public.

Gen. George M. Sternberg, late surgeon-general of the U. S. Army, was the principal speaker of the evening. He said: "Since the discovery of the bacillus it has become apparent that tuberculosis is a preventable disease and it is easy to point out the means of prevention. To secure the enforcement of the measures necessary to accomplish this result is, however, by no means an easy task. It will require the united efforts of sanitarians, physicians, social workers, church organizations, fraternal organizations, teachers and the educated classes generally.

"It has also been demonstrated that in its earlier stages tuberculosis is curable in a large proportion of cases. It would seem that no humane person who has become convinced that these statements are true can hesitate to join the worldwide movement for the extinction of this deadly enemy of the human race.

"The apathy of the past was founded upon ignorance, the vigorous campaigning which has been inaugurated during recent years for the cure and prevention of tuberculosis is based upon exact knowledge, and will no doubt result in a rapid decrease in the mortality from this disease, and eventually, we hope, in its practical extinction. This hope is justified by results which have already been attained in this country and Europe." Note the optimistic ring of these words from a great scientist, who, like Koch, is himself the discoverer of a germ.

A number of other notable leaders spoke at this opening session; all with

one accord pointed to the great value of such congresses in stimulating the antituberculosis movement. Dr. Harris, health officer of Pennsylvania, presented the startling fact that his commonwealth had appropriated \$2,500,000 to start the crusade against tuberculosis in the Keystone state.

With the literary program concluded, the exhibit was formally declared open to the delegates and the visiting public; no one was denied. For two hours longer, while the Marine band filled the corridors with classical music, four thousand people viewed, for the first time, this vast exhibit which it is needless to state far surpassed anything hitherto attempted in this direction. I will not attempt to describe it; that is quite beyond the power of my pen. I will not attempt to enumerate the exhibits, for I hold in my hand a booklet of 298 pages which scarcely more than outlines the 5,000 units displayed. Suffice it to state that the exhibit covered the demonstration of every phase of the world-wide campaign against tuberculosis, from allegorical paintings to the exhibition and demonstration of tuberculous tissues fresh from the victims; from the primitive cottage on the shore of Saranac Lake, to the vast sanatoria, veritable towns in themselves, maintained by philanthropic organizations, cities, states and nations; from the filthiest tenement to the most sanitary home for the tubercular; from the crude laws and ordinances of earlier days to the most modern statutes intended to suppress tuberculosis; from the stuffy, ill-equipped dispensary to the refreshing day camp and floating hospital; from the crippled tuberculous child in the crowded public school to the modern outdoor school for tuberculous children; from the destitute and neglected tubercular in his lonely den to the renovated, educated and assisted patient through the ministrations of the visiting nurse; from the kindergarten demonstrations of the value of outdoor life to children, to the most approved methods of outdoor life occupation and pleasure; from the dark, dirty, malodorous stable to the model dairy, with ample ventilation, sunlight, cement floor, proper drains and all modern appliances, and tuberculin tested cows in the stalls; from the given-up-to-die tubercular to the restored bread-winner; these, I say, and vastly more formed the motif for the exhibit, in photograph, relief-map, miniature, chart, model, diagram and pathologic specimen.

The greatest value of this exhibit is to come to this country through the 200,000 people, young and old, who saw it, and have resolved to inculcate into their methods of living, much of its broad principles, not through any penpicture of it no matter how skilled the artist.

I had the pleasure of a little chat with Prof. A. T. Stewart, superintendent of the public schools of the District of Columbia. He asked me what I thought of the congress. I replied that it was the biggest thing from an educational standpoint that had ever come to Washington. He then told me that he had sent one of his assistants down to study the exhibits and report to him that very morning, and if his answer were favorable he would order all teachers, and pupils above the sixth grade, to visit the exhibit.

Viewed broadly the exhibit exemplified the classical description of tuberculosis, as a communicable, curable, and preventable disease, and afforded a lesson in hygiene which the school-children of Washington could not afford to lose.

Now, through the initiative of the Charity Organization Society of New York and the Board of Aldermen of that city its school-children and public will be privileged to view the same great exhibit, to move which to New York

required a special train of ten cars and 1,200 packing cases.

Among the pictures we have presented this evening, you will find one of a railroad coach belonging to the Missouri Traveling Tuberculosis Exhibit. A second picture of a public school exhibit. This, too, is a traveling exhibit, but is so constructed that two boys may carry it from school-house to school-house. These two pictures, very imperfect though they be, suggest two things; first, that the American people, being suddenly aware of their painful and costly ignorance, are using American business methods to educate masses by the so-called traveling tuberculosis exhibits; second, as the victory over tuberculosis is not to rest with this generation, we must educate the boys and girls. Hence there is no better point of attack than "in our public schools, where every ten out of eleven of all the children of the United States come under the jurisdiction of the public school system for approximately seven years of their lives, from seven to fourteen. No other department of our government has such an intimate relation to the whole population as has the public school system to its children." (L. H. Gulick, M.D.)

You, boys and girls of the Prescott schools, will find that the pupils of the next decade will know more about physiology and hygiene, the care of the body and the prevention of disease than you do, because these subjects will have been taught in a more exhaustive and comprehensive manner than at present. They will even count as "credits" in entering most of our colleges, in the very near future. I do not yet feel quite sanguine enough to say with A. E. Winship of Boston that "A teacher or superintendent who will deliberately say that the disciplinary value of any subject now taught is greater than that which could be gained from teaching about tuberculosis is wanting in a knowledge of educational values."

We will now turn our attention for a few minutes to the second great division of the congress, the meetings of the sections. These were formally opened Monday, September 28th, under even more auspicious circumstances than the opening of the exhibit. Here the United States Government presided, with Secretary of the Treasury Cortelyou as the personal representative of President Roosevelt, in the chair.

As the Marine Band struck up the strains of a popular march, the official delegates from thirty-three foreign countries filed upon the stage. Some, like Koch, were physicians of worldwide repute; others were army officers, resplendant in full uniform and royal decorations; others were ambassadors or attaches from the legations in Washington; and besides these, there were the officers of the congress, and the officers of the National Association for the Study and Prevention of Tuberculosis.

When those on the platform were seated, Secretary Cortelyou arose to open the session. (And right here I wish to relate a little incident which you did not see in the press reports, but which illustrates most forcibly the intense earnestness of this high official. Glancing over the men on the platform he failed to see a clergyman. Evidently none had been provided. Unembarrassed, he asked that audience of 4000 people to bow their heads in silent prayer to God, that He might be with us in our deliberations.) I will quote two paragraphs from Secretary Cortelyou's address: "It is a great honor to be called on to preside over this distinguished gathering, and particularly to do so as the representative of the President of the United States, whose welcome and whose good wishes I am commissioned to convey to you this morning. In the name of the Ameri-

can people, for whom he speaks, he congratulates you on what you have already accomplished, and upon the promise of much greater accomplishment in the beneficent work in which you are engaged. . . . We are living in a day of great moral and material movements. It is a time of uplift, of widening vision, of deepening research, of broadening co-operation. The days when a people of a state or 3 nation sat idly by and left to desultory investigation the study of evils which gravely menaced the welfare of large numbers of people, are passing away, and in their place we find concerted action either under governmental inspiration, or with governmental encouragement, which in many instances is enlarged into such potent international organizations as this congress."

Secretary-General Fulton of the congress called the roll of nations, alphabetically, not according to diplomatic seniority, as is customary in functions at Washington. All responded in happy felicitations. When China was reached there arose a young Chinaman in American costume, Dr. Jee, a former Yale medical student, who greeted us in fluent English. He declared that the Chinese delegates had come to learn that China's medical system was antiquated, and that his country was much indebted to America and Europe for advances that have been made. "We must work out our own medical salvation through our own medical men," he added, and concluded by expressing hope that China might some day entertain the International Congress on Tuberculosis. When Germany was called, His Excellence, Prof. Dr. Robert Koch, arose, and with him the whole assembly, who cheered him to the echo, saluting him with the chautaugua salute. Second only in vigor and spontaneity of outburst was that welcome accorded Dr. E. L. Trudeau of New York. He addressed us

in these words: "As a pioneer and veteran in the struggle against tuberculosis in this country, I welcome the International Congress to our shores. For thirty-five years I have lived in the midst of a perpetual epidemic, struggling with tuberculosis both within and without the walls, and no one can appreciate better than I do the great meaning of such a meeting. I have lived through many of the long, dark years of ignorance, hopelessness and apathy, when tuberculosis levied its pitiless toll on human life unheeded and unhindered. when, as Jacoud has tersely put it, the treatment of tuberculosis was but a meditation on death! But I have lived also to see the dawn of the new knowledge, to see the fall of the death rate of tuberculosis, to see hundreds who have been rescued, to see whole communities growing up of men and women whose lives have been saved and who are engaged in saving the lives of others. I have lived to see the spread of the new light from nation to nation until it has encircled the globe and finds expression today in the gathering of the International Congress on Tuberculosis. with all that it means to science, philanthropy and the brotherhood of man. But the end is not yet, and I bid you Godspeed on the great task that is before it."

I will now ask you to visit for a moment only, each of the seven sections of the congress.

Section I—Pathology and Bacteriology. Here Dr. William Welch of Johns Hopkins University is in the chair, a sufficient guarantee in itself of the success of the section. In this section the different modes of invasion of the germ and its different types of destruction of tissue, as well as the varieties and species of the tubercle bacillus were discussed. Or, "its function might be expressed as correspond-

ing to that of a scientific medical clearing-house, from which many facts of great practical importance were issued. Clinicians, hygienists, sociologists, philanthropists, veterinarians, legislators, writers and citizens can all secure from this source negotiable scientific paper of great value, and in this respect, perhaps, the section performed its highest function."—(T. O. L., Nov.)

II—Clinical Section Study Therapy of Tuberculosis. Dr. Vincent Y. Bowditch, of Harvard, in the chair. This polished gentleman from Plymouth Rock was a most agreeable presiding officer. This section embraced the clinical study and treatment of tuberculosis, as well as the study of sanatoria, hospitals, dispensaries and the home treatment for the tuberculous. It was in this section that the methods of early diagnosis were discussed, as the X-ray, hypodermic injection of tuberculin, and the two new methods, the Calmette or opthalmic, and the von Pirquet or cutaneous. It was this latter method which occasioned some very unfavorable comment through the ignorance of newspaper editors. I saw Prof. von Pirquet "innoculate" a number of children at the Children's Hospital, one mother bringing her six months old babe, with a wretched cough, for the test. I must say it is one of the most humane and harmless diagnostic procedures a physician may use.

In this section much time was spent in the discussion of sanatoria, and I believe with Dr. Frederick I. Knight of Boston, that, "that the establishment of sanatoria, public and private, has served not only to arrest the disease in many patients subjected to their strict regimen, but has been of incalculable worth in teaching preventive measures to many others." It therefore follows that a city's defensive agencies against tuberculosis are increased in proportion to its sanatoria, public and private.

Section III—Surgery and Orthopedics. Here we find the celebrated American surgeon, Dr. Charles H. Mayo of Rochester, Minn., in the chair. Here we are pleased to note improved methods in treating tubercular glands, joints and bones, and the innumerable deformities due to tuberculosis, and were greatly rejoiced to learn that future generations may hope to escape much of the surgery of the past because of better surgical methods used in conjunction with equally improved serum therapy.

Section IV-Tuberculosis in Children. Dr. A. Jacobi in the chair. This kindhearted, sympathetic gentleman, with hair as white as the driven snow, has been a mighty guardian to the children of New York, and through his writing, to the profession of the country. In this section we learn that, "The field in which the decisive battle of our future campaign against tuberculosis must be fought is the home; our chief enemy, infection in early childhood; our heaviest gun and our most crying need, camps, 'preventoria,' for the reception and cure of infected or exposed children before they have become unmistakably tuberculous." (Dr. Woods Hutchinson, N. Y.)

Section V—Hygienic, Social, Industrial and Economic Aspects of Tuberculosis. Here we learn that the total cost (of tuberculosis) in the United States exceeds \$1,000,000,000 per annum. Of this cost, about two-fifths, or over \$440,000,000 per annum, falls on others than the consumptive. (Prof. Irvin Fisher.) We also learn that our campaign cannot be won unless we pursue our microscopic enemy into the mills, and mines, the factories, furnaces and stoves of every State. (John Mattin, N. Y.)

Section VI—State and Municipal Control. Surgeon Wyman in the chair. In this section, some like New York City and the State of Maryland, may look with pride upon the inauguration of municipal and state control of tuberculosis, but most of us must blush for shame at the almost criminal negligence of our cities and states, "for we know how to prevent and how to cure tuberculosis, and the question of the eradication of the disease now lies in the hands of statesmen." (Dr. Latham, J. O. L.)

Section VII-Tuberculosis in Animals and its Relation to Man. There were many scintillating incidents in this section and its joint meeting with Section I, for Prof. Koch touched a live wire among the younger school of investigators, when he said, "that up to date, in no case of pulmonary tuberculosis, has the bacillus of bovine type been definitely demonstrated." This so-called vounger school reckons among its numbers such leaders as Dr. Arthur Newsholme of England, Dr. Arloing of France, Dr. Theobald Smith of Harvard, and Dr. M. P. Ravenel of Wisconsin, all of whom have proven to their own satisfaction that most of the glandular, joint, and intestinal tuberculosis of children is caused by the bovine bacillus.

"If the inclination of the general public does not drive it to correct the evils to which it is exposed through the use of impure, infected, and dirty milk, it should bear in mind that common humanity imposes various sacred obligations, among which pure, wholesome milk for children ranks near to the first place. We have no right to shirk this obligation, and would have no inclination to shirk or ignore it if we took the time and trouble to investigate the number of deaths, especially among infants, directly due to contaminated milk. Most intelligent persons who read have some knowledge of the fact that numerous babies die from no other cause than the use of impure milk." (E. C. Schroeder, M. D. V.)

At the close of this discussion Dr. Koch said: "Why should I object to a statement that I now admit that bovine tuberculosis can be transmitted to human beings, when, as a matter of fact, I never denied it." Dr. Koch's contention today is that tuberculosis of the lungs in the human, is rarely of bovine origin.

Many of you remember reading in the press reports how President Roosevelt appeared in the congress at its closing hour. "The hall was filled with several thousand foreign and American delegates, who shouted themselves hoarse, following the President's address. Men threw their hats in the air and cheered like mad, while the women delegates cried themselves hoarse, and waved their parasols enthusiastically."—(Washington Times.)

A few paragraphs from that forceful address: "I could not deny myself the privilege of saying a word of greeting to this noteworthy gathering. It is difficult for us to realize the extraordinary changes, the extraordinary progress, in certain lines of social endeavor during the last two or three generations, and in no other manifestation of human activity have the changes been quite so far reaching as in the ability to grapple with disease."

It is not so very long, measuring time by history, since the attitude of man toward a disease such as that of consumption, was one of helpless acquiescence in what he considered to be the mandates of a supernatural power.

"It is a short time since the most gifted members of the medical profession knew as little as any layman of the real cause of a disease like this, and, therefore necessarily, of the remedies to be invoked to overcome them. It is an affair of decades—I am almost tempted to say an affair of years—when we go back to cover the period in which progress has been made."

We have hastily reviewed the exhibits, we have visited together all of the sections, and you now ask me, "Is there no new cure for consumption?" I answer there is no new cure. Consumption is curable. In this congress we have remodeled, or rather made more effective, all our implements of warfare. The campaign, by the very nature of our foe, is projected into the future, and our designated points of attack are best enumerated in the resolutions passed by the congress, with which I close:

r. Resolved, That the attention of state and central governments be called to the importance of proper laws for the obligatory notification by medical attendants, to the proper health authorities, of all cases of tuberculosis coming to their notice, and for the registration of such cases in order to enable the health authorities to put into operation adequate measures for the prevention of the disease. (Vide, Prescott City Council.)

Resolved, That the utmost efforts should be continued in the struggle against tuberculosis to prevent the conveyance from man to man of tuberculous infection as the most important source of the disease.

That preventive measures be continued against bovine tuberculosis and that the possibility of the propagation of this to man be recognized.

Resolved, That we urge upon the public, and upon all governments, the establishment of hospitals for the treatment of advanced cases of tuberculosis.

- 2. The establishment of sanatoria for curable cases of tuberculosis.
- 3. The establishment of dispensaries and day and night camps for ambulant

cases of tuberculosis which cannot enter hospitals and sanatoria.

Resolved, That this congress endorses such well considered legislation for the regulation of factories and workshops, the abolition of premature and injurious labor of women and children, and the securing of sanitary dwellings, as will increase the resisting power of the community to tuberculosis and other diseases.

That instruction in personal and school hygiene should be given in all schools for the professional training of teachers. That whenever possible such

instruction in elementary hygiene should be entrusted to properly qualified medical instructors. That colleges and universities should be urged to establish courses in hygiene and sanitation, and also to include these subjects among their entrance requirements, in order to stimulate useful elementary instruction in the lower schools. That this congress endorses and recommends the establishment of playgrounds as an important means of preventing tuberculosis through their influence upon health and resistance to disease.

WHY DO SO MANY APPLICANTS FAIL TO PASS THE BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA?

BY F. C. E. MATTISON, M.D., PASADENA, CAL., MEMBER OF THE CALIFORNIA STATE BOARD OF MEDICAL EXAMINERS.

I presume that if this question was given by a member of the Board of Medical Examiners it would be characterized immediately as a "catch question" or "too technical" or "unfair," for in order that I may answer it I shall find it necessary to "crib," or if I do not use a "compends," I shall request your permission to "crib" at least a portion of what follows, for cribbing seems to have become a favorite pastime at our State Board Examinations, and those who crib the hardest seem to make the most vigorous protest when their efforts fail

In considering this question, it is well to start the discussion of the subject by asking another question.

What are the necessities for the existence of State Boards of Medical Examiners?

There are today 335 medical colleges in the world; of these, we have 161 medical colleges in the United States, whi'e the thirty other nations all together have 174; in other words, the

United States has 48 per cent. of the medical colleges of the world, while the thirty other nations have 52 per cent.

All European medical schools are medical faculties of universities, or under the direct control of universities; there are no proprietory schools such as predominate in this country.

The United States is the only leading nation which does not require a thorough preliminary education in physics, chemistry and biology of every matriculent in medica! colleges. It may readily be inferred that with the existence of 48 per cent. of the medical schools of the world in the United States, and where most of these are proprietory schools, that there is an effort on the part of some of these schools to graduate students, who by reason of their lack of preliminary education or inadequate training, are below the standard of medical education which seems necessary to safeguard the public against the incompetent.

Why do the proprietory schools graduate the incompetent? The Council or Medical Education of the American Medical Association found that from the information furnished by the colleges themselves, that the tuition fees from twenty of the medical colleges in the United States range from \$75 to \$180 per annum, and that the actual expense of teaching the student per year ranges from \$250 to \$600 per capita, or more, each year. This shows the commercial spirit which must prevail in the proprietory medical schools when the deficit between \$250 per annum and \$500 per annum per capita of student in the colleges must be met by the professors of such schools. Either the professors in these schools are actuated by the higher motive or the desire to impart their knowledge upon a recipient student body, or they are actuated by the questionable and unethical desire to see their names blazoned among the list of professors in a medical college. Be that as it may, of the 161 medical schools in the United States, 82 were found to be of acceptable grade, and 39 were found worthless, 40 were to be regarded as susceptible to improvements which would bring them into the acceptable class. If 50 per cent. of the colleges in the United States whose graduates come before medical examining boards are below the standard of "acceptable grade" in medical colleges, what can we expect of the graduates of these institutions? The remedy would seem to be to ask these colleges to raise their standards; this is being done very rapidly by many of the schools.

The raising of the preliminary requirements for admission to medical colleges will result in a merging of many of the colleges. When this is done, we will have fewer colleges but better colleges. It will be the means of driving out the poorer colleges and raise the standard of the medical student body.

When this work has advanced to a

point where all schools have the same entrance requirements and the same course of study, the necessity of medical examining boards will not exist, and the graduate of such schools will be the recipient of a diploma which would be honored by any State or country.

It is evident that the campaign to place American medical education on an acceptable and fairly uniform plane must be carried on vigorously.

When we consider these facts relative to medical colleges, and then consider for a moment the lack of uniformity in the medical practice acts in the various States, we will find that this lack of uniformity results in a lack of reciprocity. There are thirty-four States who have established reciprocity with four or more other States, but there are a number who have been given legal authority to do so, but have not taken advantage of it.

State boards must exist where there is a lack of reciprocity, and uniform reciprocity cannot exist where the essentials for reciprocity do not exist; these are:

First—A uniform standard of preliminary education.

Second—A uniform standard of medical education.

Third—A uniform standard of medical examination.

Granting that we have the first two, how shall we manage our State Board examinations so that they shall be uniform? It has been suggested by the Council on Medical Education of the American Medical Association that we should have a single association of State licensing boards organized, which should consist of delegates who are active members of State boards, representing every State in the Union; such an association would be of enormous service in handling such matters as the withholding of recognition from disreputable schools and working out the vexed problems of reciprocity. Such a board could establish some in examinations held by examining boards.

The adoption of a single Board of Medical Examiners for all the States is a step in the proper direction. Multiple boards in a State are confusing, retard the advancement of medical education and have no reasons for their ex-The distinction between the istence. various schools of medicine, is purely an educational one. What matters it whether a practitioner of medicine is a Regular, Homeopath, Eclectic, Physic, Medic, Osteopath, Naturopath, or any other issue, if the preliminary educational requirements are the same? If the practice of medicine is in the hands of practitioners who know the structures of the body and the physiological actions and functions of human structures and organs, no harm will result whether the therapeutic of an individual case is the administration of drugs or hygienic, dietetic or mechanical, the public are in safe hands.

The practice of the healing art should be in the hands of properly educated and properly trained individuals, and the existence of State boards are merely a part of the police power of the States to safeguard the public against the incompetent. It cannot be denied that the manner of conducting the various examining boards is not ideal. A written examination is not an ideal examination: a practical examination is an ideal examination, but is not feasible. The answering of State board questions which may be done by any student who can commit to memory the contents of a Ouiz Compends, is not an ideal test of his qualifications to practice medicine; he may be deficient in the practical knowledge of the subject and lack the clinical knowledge which makes him a safe practitioner. One may have a clinical knowledge of the practice of the healing art, and lack the literary power to put that knowledge on paper. It is possible for a student who has no clinical knowledge to answer State board questions so as to easily attain the minimum average of 75 points required by law.

Is it possible to give a practical or oral examination? The Board of Medical Examiners of the State of California, as an example of State Examining Boards, is made up of members from four schools, who must not be a member of the staff of any college. They must conduct three examinations each year, for which they receive a per diem of \$10 and traveling expenses, which traveling expenses is but for their railroad fare; the expenses of the board must be met by the fees from those who take the examination. It is needless to say that the finances of the board are always at a low ebb, and the board must expedite their work so that they consume as little time as possible in conducting their examinations. examinations consist of ten examinations on ten subjects. The board must hold the examinations at the rate of three examinations in two days, and four examinations on the third day. Is it just to those who come before this board to expect they can do their best when so much is crowded into so short a space of time? If the examinations are held in San Francisco, those who appear before the board from the South are anxious to get through and get home and lessen their expense, and the same holds good during the examinations held once a year in Los Angeles. Those applicants from the North who travel 500 miles, wish the board to get through: the members of the Examining Board must expedite matters and hurry the examination; hence, a practical examination seems out of the question, even if the members of the board donated the extra time necessary to conduct a practical examination, which would of necessity need at least two weeks to conduct, and clinical material at hand to hold such practical examina-

The questions a State board may have given at any previous examination are common property and are published broadcast. There is a uniformity in the questions given by State Boards, the State Board of California is no exception to this rule, as is shown by the percentage who fail before other boards. California surely has its proportion of the ill prepared graduates of low-grade medical colleges, and with a State such as ours which offers so much as a home for those who are, after years of active practice, broken in health, and who by reason of their having graduated during the years when bacteriology, pathology and physiology, and the other fundamental branches of medicine were so poorly taught, are handicapped, or by these or by reasons of a physical nature. are illy prepared to stand the worry and anxiety of preparing for such examinations, that does not differ from other boards.

The percentage of failures before the California, Board averages about the same as the failures before the other State Boards, and there can be no question but that by reasons before mentioned, the applicants before the State Board are made up of a larger percentage of older graduates as well as by a large percentage of those who by their reasons for coming to the State are not sufficiently prepared for an examination before appearing before the Board.

The answers to some of the recent questions on anatomy are fair examples of answers given on other branches, but as the questions on anatomy and some of the answers as well as diagrams have been published, I will not burden you by a repetition.

I wish to cite some of the questions and answers from the California State Board verbatim et literatum:

- Q. How would you diagnose canine rabies?
- A. "The patient is full of fever, complains of being bitten, and when shown water, he barks like a dog."
- Q. What vegetable parasites may infect the epidermis?
- A. "Scabies, tubercle bacilli and crabs."
- Q. Describe the skin lesions of coccidiodies.
- A. "This is a catch question and unfair, as coccidiodes is an obsolete term for tuberculosis of the hip."

Or again from another branch:

- Q. Draw a diagram of a cross section of the spinal cord, showing the physiological divisions.
- A. For answer a rude diagram was drawn somewhat resembling a butterfly, with a circle representing the central canal in the center, this was marked "Hole for the passage of the abdominal aorta."
- Q. Describe the histological construction of the liver.
- A. "The liver is composed of five lobes and two fissures and is situated in the lower part of the thorax, its functions is the secret bile besides several other duties."
- Q. Describe the histological structure of the retina.
- A. "The retina is composed of a white or hard coat surrounded by a dark or pigmented layer."
- Q. Describe the histological structure of the Cochlea,
- A. "The Cochlea is situated on the side of the head and is composed of folded cartilage and skin."

And again:

- Q. Describe movements of the intestines during digestion.
- A. "The movement is a peristaltic action. A moving up and down—look as if they were crawling over each other."

Another answer to same question:

"Byron Robinson describes the process

of intestinal action as a whole as an abdominal rhthm which occurs at stated intervals. We have included comminutation, gradually increasing peristalsis, gladular secretion and excretion, endosmosis, osmosis and chemical reaction, and dialysis, normal phorisis, and as Lord Kelvin would say, Etherial Vortax rings undergoing readjustment and development into organized forms."

Q. Describe the vegetable parasites that may infect the epidermis.

A. "I think the correct answer would be that I don't remember."

Q. Discuss the theories of hypothyroidism and hyperthyroidism.

A. "Same answer to previous question except that I do not know."

Q. Describe the hematological features in chlorsis, secondary and pernicious anaemia.

A. "Non mi ricordo."

Q. Describe the histological structure of the cochlea of the ear.

A. "Cochlea is composed of semicircular canals, stapes and anvil. They consist of bony substance."

Q. Draw a diagram of cross section of the wall of the urinary bladder, showing histological structure.

A. "Can't draw."

Q. Diagnose atresia of the vagina from congenital absence of the same.

A. "In atresia of vagina there is a closing up of the same, the walls are intact. In absence of the vagina, the cervix be seen near the opening leading to it."

Another answer to same question:

"Atresia of the vagina is caused or due to an imperforate hymen. In congenital absence the vagina may and does usually open or communicate with the rectum."

Again:

Q. Describe the lesions in fracture of the patella.

A. "Fracture is usually transverse and the capsule may, or may not, be

torn. Repair is by the interposition of fibrous tissue."

Q. Causes and lesions in hepatic abscess.

A. "May be due to typhoid fever or the invasion of pathogenic organisms through the bile duct, to invasion of infection from inflammatory adhesions from other organs, or to the Elimococcus. The inflammatory process is circumscribed, and ceasing the pus may be absorbed, or rupture may take place either into the peritoneal cavity, or adhesions having formed, rupture may take place into the intestine, the pleural cavity or externally."

Q. Classification and description of Leucocytosis.

A. "Mono-nuclear and multi-nuclear."

Q. Causes and mechanism of pneumothorax,

A. "Penetrating wounds of the pleura cavity from without, crushing injuries, rupturing pulmonary layer, and extension of diseased process from the pulmonary tissue, such as tuberculosis, abscess, etc. Chief danger is from infection; if this does not occur, and the cause having ceased, after some distress of breathing, recovery ensues."

Q. Blood findings in typhoid.

A. "Relative increase in white corpuscles."

O. Lesions in aneurism.

A. "May be tubular, sacular or dissecting, there is a weaking or rupture of one or more coats of the artery, the tubular results in a general enlargement; in the saccular the internal coat is ruptured resulting in a more or less globular stretching of the other coats. In the dissecting there is a rupture of the inner coat at one point, the blood finding its way between the coats and returning through another opening in the inner coat."

Q. Classification and origin of urinary casts.

A. "May consist of epithelial cells or epithelium from the uriniferous tubules,

the latter being graver, as showing more damage to the kidneys."

"The fluids withdrawn from hydrothorax. Hydro-peritoneum or from any cystic fluid in any accessible organ."

"No. I. Osteoma.

"No. 2. Bacillus Anthiax."

Following are some more answers to the questions on pathology:

Q. Describe the lesions in fracture of the patella.

A. "After approximation of edges of the fracture the medullary substance becomes thickened and myelin substance by cell proliferation throws out a temporary callus. This, after about three weeks' time, wi'll become hardened by presence of calcium salts forming a permanent callus and thus union."

Q. Causes and lesions in hepatic abscess.

A. "Causes: Alcohol, injury, tubercular condition, gall stones, etc. The hepatic cells prolifiate and repair diseased tissue if cause can be removed before too late; if not, degeneration will occur."

Q. Classification and description of leucocytosis.

A. "Voyacytes and white cerpusel destroying leucocytes."

Q. Causes and mechanism of penumothorax.

A. "Causes: Traumatism, pneumonia, pleurisy, hydrothorax, tuberculosis. Effect: The air pressure on the lung tissue will cause collapse and later degeneration of the lung tissue. This disease or affection is of short duration, causing death soon if no relief."

Q. Blood findings in typhoid.

A. "The leucocytes are either absent or in such unhealth condition as to perform their functions. White blood corpuscles are greatly in access to those of a normal blood tests. Febrin of blood becomes over thick, or stringy; b'ood corpusels have a congested appearance."

Q. Lesions in aneurisms.

A. "The muscular wall of artery weakens, first, causing outer and inner to give away also; this is due to high blood pressure, the artery has expanded until tumor or bulb shape is formed."

Q. Classification and origin of urinary casts.

A. "They are casts of calcerious deposit, semi-solid, often found in ureters, bladder, pelvis, or probably in cortex of kidney. Presence of casts in kidney substance or canals, indicates lack of atonisety of kidney walls, too much normal salts, mainly calcium, while casts or lumps in bladder would indicate gravel or renal calculi, high acid, specific gravity and over amount of calcium salts."

A. "The puncture fluids that might be sent to labritory are very, very numerous. Pluresy, Cystocele, Cystoma, Mixoma, Sarcoma, Hydrocele, Hydrothorax, Dropsey, Tubercular Glands. Lapoma, Lymphadinoma, abscess in Liver or any part of the body. Poison fluids in the stomach must be drawn off."

Q. Specimen of normal kidney, student required to diagnose it.

A. "No. 4 specimen is Carcinoma."

Q. Specimen of Carcinoma.

A. "No. 3½ microscopical specimen is that of a healthy kidney, seemingly showing slight marks of fatty degeneration."

Admitting that some questions may seem unfair, that a practitioner of years may be a safe individual to license to practice, the Medical Practice Act does not confer a discretionary power on your board. They are supposed to enforce the act to the best of their ability, irrespective of the individual.

As an example of some men who have been practicing medicine in the State, previous to the time when an examination was necessary, and who are supposed to have graduated from a reputable medical college, I will give you just one example of a prescription. It would

be very easy to multiply these prescriptions, for the physicians wrote prescriptions for proprietory preparations, not knowing the ingredients at all, and caring much less. I will state that this man is supposed to have a good reputation in the community in which he practices, and the prescription is merely given as a sample of many others that might be given at this time. This man was granted a certificate in 1000 to practice medicine in the great State of California. He goes before the public with as good credentials from the State of California as any man who practices medicine in the State.

He came to this State after practicing medicine nine years in another State Would it seem reasonable to suppose that a man of this type if compelled to take a State Board Examination before any board would pass a very creditable examination?

Instances of this kind could be multiplied indefinitely, and exceed the limit of time at my disposal. But, I wish to urge upon the members of our County Medical Society one fact, and that is, legislation of all kinds is evoluntionary in its character, and that we have evoluted from one act to a better act. All of us must put our shoulder to the wheel and try to get a better act until we can get an act which satisfies us is the best act which under existing circumstances can be procured for the State of California, and when the time arrives for an evolution to a better act, we beseech you that each and every one will assist in every way possible to secure that better act.

Mr. President! If I have succeeded in the limits of a ten-minute paper in enumerating some of the causes why so many fail to pass our State Board of Medical Examiners, may I be permitted to suggest some means of correcting these errors and the manner of dispensing with State Boards of Medical Examiners?

First: We should have a uniform standard of preliminary education for all who wish to study any branch of the healing art.

Second: A uniform standard of medical education.

Third: A uniform standard of medical examination, preferably held by the Regents of the State Universities.

Fourth: Uniform State Medical Laws, for with such a uniformity of State laws, reciprocity may exist.

Fifth: The enactment of the State and Federal laws revoking the charter of all irregular medical colleges.

Sixth: The enactment of laws granting the power to State Boards of Health to revoke the license of any licentiate who is guilty of offense involving moral turpitude, habitual intemperance, or the use of habit-forming drugs, or who holds himself or herself out to cure the sick and afflicted by grossly improbable statements, or who lends his name to any institution or concern which advertises to cure diseases by making grossly improbable statements.

PRESENT OPINIONS AS TO THE VALUE OF OPSONIC INDEX DETERMINATIONS.

BY ROBERT L. CUNNINGHAM, M.D., LOS ANGELES, CAL., LATE HOUSE OFFICER IN THE JOHNS HOPKINS HOSPITAL, BALTIMORE, MD.; RESIDENT AND IN CHARGE OF THE LABORATORY AT THE BARLOW SANATORIUM, LOS ANGELES, CAL.

When Sir A. E. Wright announced his views upon the subject of immunity and published his lectures upon what he believed to be the chief immunizing

constituent of the body, and gave out what he asserted to be an accurate means of measuring immunity in man, his work was at first received with a good deal of skepticism. A short time later he visited this country to repeat his lectures, and he then demonstrated his methods in several eastern cities. His own enthusiastic confidence in his work stimulated a great many Americans to investigate the matters under discussion, chiefly opsonins, the socalled opsonic index, and the therapeutic use of vaccines. Much has been done along these lines within the four years since the subject arose, some good work and more that is unreliable. Perhaps' we are not yet in a position to say how great an advance Wright has inaugurated, but we can summarize briefly the views held at present regarding the value of opsonic index determinations.

Those men who had worked upon questions of immunity previous to Wright's publications never were carried away by his claims. In all fairness, they applied his technique to their own investigations, in some instances employing what must be recognized as more scientific standards, demanding more uniformity in their experiments and criticising their own work more closely. What attitude is now held by these men? Surely they are in position to give us valuable opinions.

In the John's Hopkins Hospital opsonic and vaccine work has been carried on under the direction of Dr. R. S. Cole. His conclusion I know personally, and I know it to be based upon a great mass of work done in his laboratory. It is the same that is shared by the other men in that institution, and all there agree that, as carried out at present, the opsonic index determinations are wholly untrustworthy as clinical guides. The procedure is no longer employed in that hospital as a clinical aid, either for diagnosis or for treatment. Vaccines are apparently helpful in certain infections, notably in gonorrhoeal arthritis, and, in emphasizing this vaccine therapy, Wright certainly has made a valuable contribution, though the method is not susceptible to the wide application he claimed for it originally.

It was recently my privilege to spend some time at work in "The Trudeau Laboratory for the Study of Tuberculosis" at Saranac Lake, N. Y. Here, perhaps more than any other place, we might expect to find the most rational and sanest views and the earliest acceptance of methods helpful in the fight against tuberculosis. In that laboratory opsonins have been tested thoroughly, and the men there have arrived at very definite opinions as to the value of the index. Suffice it to say that they have discarded the opsonic index as an aid and do not employ the procedure at present, though they use tuberculin therapeutically, in selected cases. I have repeatedly heard Dr. Trudeau say that he considers clinical symptoms and signs far more reliable indications for measuring the dose and spacing the injections of tuberculin than any opsonic index determinations could be. Dr. E. R Baldwin, who is in charge of the Saranac Lake Laboratory, says, in a recent article upon the subject, (New York Medical Journal, June 28, 1908): "Results do not encourage the expectation of much practical use of the index in pulmonary tuberculosis in the usual method of its application." Their whole experience has taught them to place a very low valuation upon the test.

Prof. Calmette expressed his views when he recently said of the opsonic index: "It is perhaps interesting, but it has no practical value." I heard Prof. Von Pirquet make almost the same remark. It is significant that the French and German authorities should agree upon this question.

I shall not go into a detailed discussion at this time, to show why eastern men have so little faith in the value of opsonic index determinations, especially as a means of guiding ourselves in the use of tuberculin. For those who wish to know more there are numerous re-

ports easily available. Many men through the East, though having no real hope for the method, yet feel that it deserves a longer trial. Possibly our views may change with time. However, in the light of present knowledge the fairest attitude is, perhaps, an open mind, though so far as it is available the weight of opinion in the Eastern

States is undeniably against the statement that the present methods of determining the opsonic index furnish us with knowledge that is of material assistance, either in the diagnosis or therapy of such an infection as pulmonary tuberculosis, or indeed, of any of the infectious diseases.

Barlow Sanatorium.

JOINT AFFECTIONS IN NERVOUS DISEASES.*

BY THOS. J. ORBISON, M.D., LOS ANGELES, CAL.

Are the arthropathies related to the neuroses? If so,—what is that relation,—and is it a fixed relation? In other words—is an arthropathy ever a neurosis, or is it always a neurosis?

These questions have been asked for the last 77 years—as medical printed records show; and for a much longer time, no doubt, in the minds of men seeking for knowledge Eighty-one years ago in the Pennsylvania Hospital, 8th & Spence street, Philadelphia, John Kearsley Mitchell, father of S. Weir Mitchell, the present Dean of Neurology in America, made a record of a case that was admitted to the Pennsylvania Hospital, suffering with a caries of the spine, and in addition suddenly attacked with, as he remarked "all the usual symptons of acute rheumatism of the lower extremeties." The usual treatment of these days consisted in the application of leeches, purgatives and cooling diaphoretics, with "evaporating lotions," to use his own words. "Disappointed in the treatment," he continued, "I began to suspect that the cause of the irritation might lie in the affected spine." He goes on to conclude that "the symptoms and their ill response to treatment, rendered possible the opinion that in the spinal marrow lay the cause of this apparently indomitable and migratory inflammation. Under this impression I caused leeches to be applied to the lumbar curve, and followed them by a blister placed on the same spot. Relief promptly followed these remedies and the pain ceasing to be felt in the limbs, was perceived only in the immediate vicinity of the spinal curve. After the blistered surface recovered its cuticle, a few leeches placed over the diseased spine removed the pain and left the patient in the usual state of indifferent health, attendant on such forms of spinal disease."

During the next three years Dr. Mitchell saw three cases of Articular Rheumatism, two acute and two chronic in character, which he treated by the application of wet cups to that section of the spine from which came the nerves that enervated the affected parts, with good results in each case. When the cups were placed on any other segment of the spine, the result was nil. He was formulating a working theory all this time. To this end he had two of the residents at the Pennsylvania Hospital try out all the cases under their care. The residents were Drs. Norris and Stewardson, both achieving great subsequent success: the former as the foremost Opthalmologist of his time. They collected eight cases which were treated at his suggestion and with universal success. Then he announced

^{*}Read before the Los Angeles County Medical Society.

his theory that the Rheumatism was due to irritation of the "Spinal marrow" and exhibited in the distal ends of the nerves. This opinion had great vogue and lasted for years. We now translate the symptoms differently and believe that better result may be obtained in other ways and by less heroic means.

However, the step was a long one in the direction of results,

In May, 1893, Edward Blake of London, England, asked this question,-"Neuroses and Arthropathies, are they related? He cites the discussion of the previous year by two eminent members of the Harvard faculty, as to the connection between chorea and rheumatism. They left it about where they began it. However, that discussion helped to stimulate the desire for more information on the subject. Blake began by defining what he meant by Rheumatism; then he went on to attempt to establish a connection between chorea and chondritis. This led him to make a rule about which, he says, he had collected many thousands of highly interesting facts. The rule was this: "The causes of chorea in woman are prone to induce rheumatism in man." He says this holds good only in adult life and cites eight causes as follows: Mental disturbance, physical shock, alcoholic excess, uric acid, septic matter, lead, arsenic and mercury. He ends his article by the following homily: "It appears as if we doctors are so much occupied with establishing artifical and arbitrary, though useful, differentiae that we seem to lose the power of recognizing alliances between the varied morbid manifestations presented to our gaze." Out of his own mouth he has condemned himself; he had just been occupying himself with artificial and arbitrary, (as well as useless) differentiae in his attempt to make foreign alliances between the varied morbid manifestations presented to his gaze.

Now we come to the present day idea concerning the relation that exists between the arthropathies and the neuroses.

Last year Lewellys Barker published an article called "Joint affections in nervous disease" and began it in these true words: "America has the honor of having first seriously directed the attention of the medical world to the intimate relation between diseases of the joints and of the nervous system." These are the words of a Professor of general medicine, and they find a hearty response from the Neurologist.

Without attempting to class all arthropathies as nervous diseases, it is the part of conservative neurology to try to separate and classify them—testing them whether they belong to the domain of purely nervous diseases or rather to that of surgery or general medicine.

To this end it seems permissible to utilize Prof. Barker's grouping with possibly one or two additions. He placed the following in the limits of neurology: The intermittent joint effusions (hydrops articulorum intermittens) 2. The arthropathies of tabes and dementia paralytica; 3. The syring-omyelic arthripathies, and 4, the painful joints of the psychoneurotics. I would add to this list the arthropathies of Reynand's disease, Erythromelalgia and Spondolitis.

Surgical interference has ofter made of a simple intermittent joint effusion a most embarrassing situation for surgeon and patient; therefore it is quite necessary to be able to diagnose the one as well as the other. The sudden onset, absence of fever, short duration and periodic recurrences should make the diagnosis comparatively in most cases. Tuberculosis should be excluded by the various tests at our disposal. Aspiration or injections are wholly unnecessary and vicious. Psychotherapy, encouragement and tonics are indicated.

It is an alarming sight to a tabetic when in a night his shoulder swells to the size of his head, or his knee assumes a monstrous and distorted appearance. When in a case of tabes the legs begin to get that characteristic falil-like motion, it behooves us to realize the danger of the tabetic joint and take measures to guard our patient. Almost any joint in the body may be affected, but the larger are the most susceptible.

The arthropathies of tabes may occur at any stage of development of the disease. Charcot first described them, and he thought they occurred early in the transitional period, just before the occurrence of the ataxia. Other observers have published different views.

In these trying cases the joint should be fixed and kept at rest; othewise a benign arthropathy is often converted into a malignant one and the patient's chances for usefulness cut off. The patient will object to the treatment at first, because his joint is painless and he cannot see into the future, but it is our plain duty to be on the safe side.

As to the syringomyelic arthropathies, their resemblance to those of tabes makes it necessary for us to diagnose them.

Ten per cent of syringomyelia cases suffer from joint involvement, which may or may not appear before the muscular wasting. The joints of the upper extremities are affected about eighty per cent more frequently than those of the lower—the converse is true of tabes.

The most distressing dislocations, luxations and fractures due to bone friability occur in these cases. It is only possible to just touch on this important subject, and not to go into it at all deeply. As to the casual factors of the arthropathies of tabes and syringomyelia, there are two theories. I. That they are manifestations of the trophic disturbance in the disease itself, That they are in reality cases of arthritis deformans. The academic question has been threshed out quite thoroughly, and the former and older theory is the most generally accepted.

The exponents of the trophic theory are Charcot, Joffroy, Erb, Oppenheim, and others. While to the other theory hold Virchow, Volkmann Rotter and others. In this country, Mills, Spiller, Dana and others abide by the older theory, while Starr does not favor it.

Now come the painful joint of the psychoneurotics. With Barker, I would be inclined to include in this group the Brodie's joints, the arthropathies of traumatic neuroses, neurasthenia and psycasthenia.

As Barker says, "it is surprising to see the wonderful transformations that take place. The miracles of St. Anne de Beaupres and of Lourdes, of osteopathy and Christian Science amaze the laity. Just as marvellous cures, but more lasting ones, attend the efforts of the physician who knows how to recognize quickly and to treat rationally the psychoneurotic manifestations."

In connection with this division I wish to speak of a case sent me last June by Dr. Alfred Fellows of Los Angeles. A man of 25 years of age walked into the office with difficulty, though aided by two crutches. The right foot was turned inward with the plantar surface looking toward its fellow and the man was walking on the external malleolus on the right side when the foot was not held off the floor altogether.

The face expressed great apprehension and pain. Perspiration stood out on the forehead. The man would cry out when the foot was touched. He said he feared he would faint on account of intense pain in the head that was associated with vertigo.

His family history was negative. His previous history can be neglected, except that he denied specific diseases. He came to me complaining of pain, tenderness and paralysis of the right lower leg, associated with fixation of the ankle joint; also for intense nervousness, headache and vertigo.

The history of his present trouble was

that in March he was in a trolley smash-up at about II p. m. He became unconcious at once, was taken to a hospital and remained unconcious until next morning about four o'clock. About twenty-four hours after the accident he began to realize his condition; felt sore all over; his head ached and his right leg was swollen and anaesthetic to outside stimuli, but felt shooting pains all through it. He could not feel a pin prick below the proximal third of the thigh, and had no power at all in the leg or toes. The left leg was all right. His brain felt as though it were being pressed upon and as there was a tight band about the head. He had diplopia at times. Tinnitus was annoying. There was no disturbance in micturition or defecation. He remained in the hospital one week and was then taken home and stayed in bed about three weeks. During that time he was unable to walk. After that he could hobble about with the aid of crutches.

About a week after he began to walk he had a spell of unconsciousness; as he was getting off a car he fell to the ground. The unconsciousness lasted a few minutes and during it he lay limp, without convulsive movement of any kind; there was no involuntary micturition. He became conscious quickly, his mind was clear though his head ached furiously. Since that time he had eight or nine similar attacks, the last one four days before coming to me.

I go into this history in detail, because in every respect it is so typical of Hysteria and some of the common exhibitions. The physical examination brought out some very interesting symptoms; the reflexes, knee jerk, biceps jerk and achilles jerk were equal on both sides and not exaggerated or diminished. There was hemi-hypaesthesia, below the clavicle, on the right side (note that the diminished sensation was on the same side as the so-called paralysis). He feels pinpricks but little

over the hypaesthetic area. Throughout the affected part there is faulty localization of sensory stimuli somewhat like allochiria E.g. a pin prick on the thigh is called on the hip joint; a pin prick on the anterior tibial region is called at the knee joint and so on.

Sensation for touch and pain above the proximal third of the thigh on the right side is normal. He cannot voluntarily straighten the right foot on the leg—but does so at times involuntarily, when his attention is distracted.

Of course this was a case of Hysteria with an accompanying Arthropathy. The treatment was that of suggestion and psychotherapy, and today he is entirely well. I would only add that there was a question of damages in this case that helped prolong it. He improved more quickly when his claim was settled.

As to the arthropathies of erythromelalgia, I would say but little at this time. In a case under my care there is a district ankylosis of two toes—the next adjoining one that was amputated. This condition seems to be trophic in character and diminishes toward the normal as the trophic condition improves.

Lastly there is the arthropathy of Spondyltis. The time at my disposal does not allow of any detailed account, except to point out the necessity for diagnosing the condition from neuritis, hysteria, caries, chronic scistica, spinal tumor and spinal cord tumor. One of the diagnostic aids is to etherize the patient to find if the condition of rigidity remains. Another is the presence or absence of glossy skin over the spinal area. I had a case of spondolytis of rheumatic origin that was greatly helped by a course of mud baths, massage and guarded exercise, together with antirheumatic internal treatment.

401 Auditorium Bldg.

DEPARTMENTAL

DEPARTMENT OF TUBERCULOSIS.

Is the Opsonic Index Necessary as a Guide to the Therapeutic Employment of Tuberculin?—Opinions From the International Tuberculosis Congress.

BY F. M. POTTENGER, M.D., MONROVIA, CAL., PROFESSOR OF CLINICAL MEDICINE, COLLEGE OF MEDICINE OF THE UNIVERSITY OF SOUTHERN CALIFORNIA.

Now that tuberculin as a therapeutic agent is becoming more and more general in its use, the question is often asked, is the opsonic index necessary as a guide to dosage? Thinking that the readers of the Practitioner might appreciate the opinions of leading clinicians on the subject, I herewith present the opinions as expressed in the abstracts furnished by the authors themselves of the papers read before the International Congress on Tuberculosis, Washington, 1908.

By these papers it will be seen, that while the value of the opsonic index is recognized, yet it is not believed to be necessary as a guide to therapy. This is most fortunate for those suffering from tuberculosis, because in the first place it is impractical to make opsonic estimations sufficiently often owing to the great amount of labor entailed, to yield an accurate picture of the degree of the patient's immunity, and in the second place, very few experimenters have checked their work sufficiently to determine their degree of error, consequently the estimations which they would make would be erroneous and the inoculations would be made to depend on phenomena much less exact than clinical signs.

During the seventeen years that tuberculin has been in therapeutic use clinicians have been using it in constantly increasing numbers, until finally the number has perhaps reached into the hundreds. These have depended on clinical signs for their guidance in dosage, and have been able to report thousands of cases treated successfully. Almost without exception the method employed has been that of gradually increased dosage, and the aim has been to accustom the patients to as large doses as possible, believing that the immunization of the patient to the tuberculin is of value.

This method of dosage was not questioned seriously until Wright published his results in the treatment of localized tuberculosis, where he had utilized small doses and made estimations of the patients' opsonic index at various intervals. Wright deserves great credit for his monumental work and to him we must give the credit of establishing vaccine therapy upon a rational basis, yet we must not lose sight of the fact that other clinicians have used tubercle vaccines with equal success for years before Wright's work was done. Wright makes no claim to being able to successfully control dosage in pulmonary cases by the index, but those who have been foremost in the clinical use of the remedy have made their greatest success in this field, and have treated tuberculosis found elsewhere, as in the joints, glands, etc., for the most part, only as they appeared as complications of the pulmonary form.

So there are two methods of treating tuberculosis by means of tuberculin: One by small doses based upon the opsonic index, not applicable to ad-

vanced pulmonary cases because of the instability of the index in them, and somewhat unreliable because of the inaccuracy attendant upon the estimation of the index; the other, by gradually increasing doses attempting to reach a high maximum of dosage so as to immunize the patient to the tuberculin. This has been proven to be applicable to all forms of tuberculosis, but has been employed for the most part in treating pulmonary and larvngeal tuberculosis. It is somewhat inaccurate because of the difficulty of recognizing symptoms and estimating physical signs. While both are somewhat inaccurate, they are not alone in this, because few remedial measures in medicine are not so, yet they will both yield excellent results and offer those suffering from tuberculosis their best chances of cure.

While Wright and some of his pupils are somewhat dogmatic in their demand that the index be used as a guide, yet they offer us no help in a large class of pulmonary invalids who demand our attention and who have been greatly benefited at the hands of such clinicians as Trudeau, von Ruck, Bowditch, Petruschky, Moeller, Denys, Sahli, Beraneck, Neusser, Philip, Spengler, and many others who might be mentioned.

* * *

The following abstracts give the opinions of Trudeau, and his followers at Saranac, and those of Professor Hastings of Cornell, and seem to represent the opinions of the clinicians as to the necessity of the opsonic index as a guide to the therapeutic use of tuberculin.

Dr. E. L. Trudeau, of Saranac Lake, N.Y., read a paper on "Antibacterial or antitoxic immunization in Tuberculin Treatment," in which he said:

"A clearer conception of what we are trying to accomplish by tuberculin treatment is very necessary to guide us in our method of treatment. Two main theories: Vaccination theory, which claims to bring about by injections a

specific immunity to tubercle bacillus and toxin immunization theory which aims merely to produce by steady and gradual progression in dosage the greatest degree of tolerance or immunization to chemical poison of the tubercle bacil-Under the first conception, the specific immunization to the bacillus are Koch's later attempts at producing an immunizing tuberculin, both local and focal reactions being looked upon as useful in the production of the specific immunity to the bacillus; also the work of Wright and his vaccine treatment guided by the readings of the opsonic index. Under the toxin immunization theory, of which Denys and Sahli are the most brilliant exponents, the main feature of the treatment is to produce by progression in dosage the highest degree of tolerance to the poison of the tubercle bacillus attainable, considering reactions and all constitutional disturbance as not only not desirable, but to be avoided as much as possible. The claims of both conceptions are discussed, the conclusion reached by the writer being that neither is quite satisfactory owing to our imperfect knowledge of the mechanism of tuberculin immunization. If we must have a working theory and must decide between the two the writer prefers, for the present, to hold to the conception of an immunity that is principally at least antitoxic as produced by the treatment and to consider tuberculin habituation its essential feature and the best guide to dosage.

"If we accept the toxin immunization conception as the essential feature of the treatment and guide to dosage instead of measuring the degree of a questionable antibacterial immunity by the opsonic index or attempting to produce it more or less empirically by a series of reactions, the severity of which we cannot in any way control, the main features in our treatment would be:

"To raise the degree of tolerance to tuberculin to the highest point attainable in each case by an almost imperceptible and long-continued progression of dosage.

"To avoid general and focal reactions as much as possible and consider them merely as evidences of intolerance.

"To follow no arbitrary rule, as to rate of increase or maximum dose to be reached, but to be guided merely by the degree of toxin tolerance of each patient as shown by the symptoms and general condition which the highest individual maximum dose attainable be only a small fraction of a milligram or a cubic centimeter or more."

* * *

Drs. Hugh M. Kinghorn, David C. Twichell, Norman M. Carter, and Mr. F. W. O. Werry, B.A., of the Saranac Laboratory for the Study of Tuberculosis, Saranac Lake, N. Y., Dr. E. L. Trudeau, Director, read a joint paper entitled "The Accuracy of the Tuberculo-Opsonic Index and Its Value as a Control to Tuberculin Treatment in Pulmonary Tuberculosis."

This paper is divided into two parts. The first deals with the accuracy of the tuberculo-opsonic index, and the second with the value of the test as a control to tuberculin treatment in pulmonary tuberculosis.

In order to obtain an estimate of the degree of accuracy of their work they made control tests at variable intervals Twenty-three series of tests of one healthy serum were made. Each series consisted of 4.35 separate tests. In all, one hundred tests of the same serum were made. These tests were made by three different observers, all of the same accuracy. The object was to find the mean error of a single observation. The whole question is attacked from a mathematical point of view. The mean error of a single observation was found to be plus or minus 14. So that given a test serum and a standard normal serum a margin of plus or minus 14 must be allowed.

Their chief objects in making tuberculo-opsonic tests on phthisical patients that were being treated with tuberculin were to endeavor to get a general view of the effect of the doses on the opsonic indices of the patients, and to see if they should have to modify their present methods of giving tuberculin from the information obtained. Their method of administering tuberculin was according to the slow or progressive method, and they followed the directions given by Dr. E. L. Trudeau. The doses were given at intervals of three to four days. When large doses were reached the intervals were lengthened. They did not follow Professor Wright's method and control the doses by the opsonic index, but critically examined the effect of the doses on the opsonic index. In most of their patients the index was tested off and on throughout the whole course of treatment. In this way a continuous immunity curve was obtained. From their work they feel that they have proved that the tuberculo-opsonic index is raised by injections of tuberculin; that in a majority of tests definite negative phases occur, followed by positive phases; that when they gave injections at intervals of three to four days onequarter of the doses were given when the opsonic index was still in the negative phase; that when an injection was made during a negative phase the index was rarely depressed still further, but that a positive phase at once set in; that in only 19 per cent. of cases had the positive phase not ceased before the next injection was given when the interval was three and four days.

They think that while it is quite impracticable and impossible to use the test each day on each patient, yet from their work the test may perhaps show itself to be of definite value with regard to spacing of doses; namely, that the intervals between doses should occasionally be considerably longer than three to four days. They regard the tuberculo-opsonic

test as one of fair accuracy, but think that it is of doubtful value to control tuberculin injections on phthisical patients. They think that the aim of tuberculin treatment is rather to produce tuberculin immunization than merely to keep the opsonic index at a high level."

Dr. Thomas Wood Hastings, Professor of Clinical Pathology, Cornell University Medical College, New York City, Assistant Attending Physician to Bellevue Hospital, presented a paper entitled "The Opsonic Index, in Certain Tuberculous Infections," in which he took up:

- I. The possibility of estimating an opsonic index.
- 2. The normal opsonic index and the variations found with normal sera. The variations found with the sera from tuberculous individuals.
- 3. Variations found in the opsonic index in individuals not under tuberculin therapy.
- 4. Variations in the opsonic index in cases under tuberculin therapy.

From the nature of the tubercle bacillus infection (chronicity) and from the relation of opsonin to infection one is justified in applying studies of the opsonic index in non-pulmonary conditions to the problems relating to pulmonary tuberculosis.

Among twelve pulmonary cases examined, two gave indices within normal limits, and this fact called our attention to the inconstant occurrence of a low index in tuberculous infections.

In ten pulmonary cases the few isolated determinations of the index were low, below 0.6, regardless of the condition.

The indices, therefore, did not correspond to the clinical condition and they certainly were not to be used as guides to inoculation.

The one fact emphasized by all the records is that wide variations in the index occur in tuberculous individuals,

but not invariably over short periods of time, so that to establish a pathological variation the safe plan is to estimate indices two or three times a week for a period of two weeks.

While the variations are sufficiently great to mark a serum as abnormal and perhaps pathological, they are so wide without inoculations and so inconstant after inoculations that one cannot safely use the index as a guide for tuberculin inoculations.

* * *

The following abstracts are also of great interest and value and bear indirectly on the subject under discussion because they are from clinicians who have been employing tuberculin for years, using as their guide the clinical symptoms and signs presented by the patient. For authority we can not ask higher, and for results we can not ask better:

The paper of Prof. G. Denys, University of Louvain, was on "Filtered Broth of the Bacillus of Human Tuberculous as a Curative Agent in Tuberculous Affections of Man." He considered:

Exploitation since 1896 of a treatment of human tuberculosis, presenting two characteristics:

- I. Product used.
- 2. Manner of using this product.

The product is the liquid obtained by filtering through a porcelain filter a culture of the bacillus of human tuberculosis, grown on peptonized and glycerinated bouillon and brought to its full development.

Use of the product F. B. (filtered broth) without any modification, either by physical agents (heat, precipitation) or by chemical agents capable of changing it.

Product equivalent to diphtheria and tetanus toxins from which come the antidiphtheritic and antitetanic serums.

Suitable dose of F. B. injected under the skin of tuberculous patients produces phenomena analogous to those of tuberculins in general, viz.:

- I. Cutaneous phenomena—inflammation at the site of the puncture.
- 2. General phenomena: Rise of temperature, nervousness, malaise, weakness, loss of appetite, etc.
- 3. Specific phenomena: Return of general symptoms or appearance of new symptoms.

Great variation in dose necessary to produce these symptoms. Marked reactions obtained in very sensitive subjects with 0,000.1, 0,000.01, 0,000.001 gr. and even with less.

The writer is convinced of the possibility of curing human tuberculosis by means of F. B. by a complete immunization of the patient, and of "succeeding in causing large doses of F. B. O.I, 0.5 and even I cc. to be tolerated by the patient without appreciably injuring his health."

In other methods reactions are tolerated and even encouraged. The writer is convinced of the necessity of avoiding all strong or moderate reactions to immunize a patient from tuberculosis, and of tolerating occasionally only light reactions. He considers moderate or strong reactions, or even light reactions too frequently produced, as harmful and dangerous.

Rules for converting this general principle into practice.

- I. Begin with a very small dose, 0,000.000.05 to 0,000.000.1 gr., for afebrile tuberculous patients; 0,000.000.000.5 to 0,000.000.001 gr. for even slightly feverish ones.
- 2. Never inject during a reaction nor when it is just ending.
- 3. Leave an interval of from one to several days between the end of a reaction and the following injection.
- 4. Never increase the dose if there is any reaction whatsoever. Diminish the dose if the reaction be at all strong.

By following these rules, we succeed in giving, without reaction or discomfort, I cc. of pure F. B., a dose twenty millions and two billions times stronger than the doses indicated above for the beginning of the treatment.

Considerable variation in individuals in accustoming themselves to F. B. In general, their adaptability and improvement go hand in hand. The writer is convinced of the impossibility of not recognizing the efficacy of the F. B. treatment.

The writer refers, for the development of these views, to his book published in 1905, entitled: "The curative action of the filtered broth of the bacillus of the tuberculosis of man in human tuberculosis." Editors: Uystpruyst, Louvain and Doin, Paris.

Since then his conviction, which is shared by many of his confrères, a certain number of whom have published their results, has increased, and he declares that F. B. is a most efficacious curative agent for most forms of tuberculosis, especially in the beginning of the disease,

For pulmonary tuberculosis, the author advances the following propositions, based on a twelve years' experience:

- I. Almost certain cure in closed pulmonary tuberculosis.
- 2. In afebrile, ulcerated pulmonary tuberculosis, the infection is generally arrested, and the less advanced the lesions, the more complete the cure.
- 3. In cases remaining a long time febrile, decrease of chances of cure, on account of the height and tension of the fever and the extent of the lesions.
- 4. In hectic period, chances are weak. Large proportion of cures by F. B. in pleurisy, laryngitis, enteritis, peritonitis, adenitis, osteitis, arthritis, cystitis, etc

Failure of F. B. in rapid or galloping cases, through lack of time to immunize the patient.

Treatment with F. B. does not exclude other forms of treatment. It is absolutely inoffensive, even in febrile

cases, if the above mentioned rules be observed.

* * *

Professor F. Petruschky, of Danzig, also read a paper on "The Use of Tuberculin." He stated:

Dr. Koch's tuberculin and similar preparations are sterile metabolic products of the tubercle bacillus. They serve three important purposes:

- I. For early diagnosis of latent tuberculosis.
- 2. For specific treatment of the first stages of the disease.
 - 3. To control the recovery.

In Germany tuberculin as a means of diagnosis and treatment has been adopted by the great majority of tuberculosis specialists. The cutaneous test (Pirquet's) affords a welcome simplification of the specific diagnosis. We should try most systematically to diagnose and treat tuberculosis with the aid of tuberculin while it is still closed and produces no infectious excretions. All attempts to segregate and to treat patients already infectious are too late.

All attempts at prophylaxis without employment of the specific remedy are like the use of a fire engine without hose. Another interesting paper, on "The Value and Practicability of the Use of Tuberculin in Pulmonary Tuberculosis," was read by Professor Dr. K. Hammer, of Heidelberg, Germany. His synopsis follows:

- I. Tuberculin (old tuberculin and new tuberculin) deserves to be considered at length in the treatment of tuberculosis of the lungs as well as of other organs.
- 2. Tuberculin properly used is a harmless remedy.
- 3. The physician prescribing it must be well acquainted with the technique of its employment and must have sufficient experience to be capable of judging the signs of reaction.
- 4. Tuberculin can be used in all, even in the most advanced cases of tuberculosis. In these recovery cannot be hoped for, but many disagreeable symptoms can be eliminated. Recovery is to be expected in cases of the first stage (Turban's classification), also in cases of the second, and sometimes even of the third stage.
- 5. The ideal method of treatment is at present a combination of the climatic with tuberculin.

THE DESTRUCTION OF RATS.

Lord Carrington, Minister of Agriculture, received a deputation consisting of Sir James Crichton-Browne, Mr. Theobald (vice-president of the Agricultural College), Mr. Boelter (Incorporated Society for the Destruction of Vermin), and others urging the importance of the extermination of rats. Mr. Boelter said that the amount of damage done by rats in Great Britain exceeded \$75,000,000 annually. This figure was arrived at by allowing only one rat to each acre of land under cultivation, and assuming that it did damage only to the extent of half a cent a day. Over \$1,250,000 was expended every year on rat poisons, or about ten times the amount required to carry out the work

of complete extermination on systematic lines. The deputation laid before Lord Carrington the draft of an act which they would like to see passed. This leaves it to the local authority to take steps for the destruction of rats, and if they fail the local government board shall do the work, the expenditure to be refunded by the local authority. Inspectors are empowered to enter without warrant any suspected area (dwelling house, outhouse, factory, warehouse, dock, wharf, railway station, stable, sewer, field, garden, and stacks of wood, hay and corn. For obstructing an officer the fine would be about \$25. It is expected that the Board of Agriculture will make known its decision in about a month.-Journal A. M. A.



A MEDICAL, CLIMATOLOGICAL AND SOCIOLOGICAL MONTHLY MAGAZINE.

Established in 1886 by WALTER LINDLEY, M.D., LL.D., Editor and Publisher.

This journal endeavors to mirror the progress of the profession of California, Arizona and New Mexico.

DR. F. M. POTTENGER, DR. GEORGE H. KRESS and DR. JOHN W. FLINN, Assistant Editors,

DR. H. BERT ELLIS, DR. GEO. L. COLE and DR. W. JARVIS BARLOW, Associate Editors.

Address all communications and manuscripts to

EDITOR SOUTHERN CALIFORNIA PRACTITIONER. Subscription Price, per annum, \$1.00.

1414 South Hope Street, Los Angeles, California.

EDITORIAL

VALUE OF THE OPSONIC INDEX.

The concensus of opinion, at the time of writing, of those men who are doing the preponderance of work along the lines of opsonic treatment is unqualifiedly in favor of the use of the index as a guide to the time and the dosage of inoculations, and as a key to the progress of the disease under treatment. This applies to all the infectious diseases thus far studied with the exception, possibly, of such conditions as acne and furunculosis, and even in these ailments the necessity of an index at the commencement of the treatment is self evident.

The scrupulous observation of the index at brief and regular intervals is of paramount importance in tuberculosis; it matters not whether the treatment consists of inoculations with tuberculin or whether by graduated exercise or

labor, since in either case it furnishes the criterion of safety. For example, a patient with pulmonary tuberculosis in its primary stage, that is to say, when one is dealing with a simple tubercular infection, should never receive injections of tuberculin at random or even at regular intervals without the index as a control, for the reason that such procedure is distinctly unscientific and, what is more, dangerous, since it is a simple matter to lower thereby what may already be a safe positive phase. Unfortunately instances of such procedure are not infrequent. Several cases have come under my observation when all the good that had been accomplished was lost. A particular instance may be mentioned. A patient whose initial index was 0.8 received weekly inoculations of tuberculin in doses of 0.00025 Mg. For a time she

did well, but later her cough increased, she lost weight and felt wretched. Her index was again taken, and found to be 0.5. What had occurred was simply the creation of a succession cumulation of negative phases, a condition which corresponds to the effects of too much work or exercise, which might have been avoided had the inoculations been regulated by the index. Again, too much stress cannot be laid on the necessity for painstaking observations of the index in cases of pulmonary tuberculosis in which there are mixed infections. These by-infections are matters of serious import of themselves and require as careful watching as the original infection itself. Take, for instance, a case of complicated tuberculosis of the lung. It would be, and is, quite unscientific to combat such a condition by tuberculin alone or by any measure directed singly against the tubercular infection. The mixed infections should be attacked first. Once these are under control, much may then be hoped from any rational plans of treatment. It is wise to determine always in such cases what organisms are responsible for the mixed infection, to which one or more of them the body index is low, and to continue the observation of these indices throughout the treatment. This necessitates much careful work, yet I know of no other safe plan. By such means one possesses with considerable accuracy a knowledge of the resisting powers of the patient and a guide to the time for inoculations. The clinical symptoms are not wholly to be trusted. Given a patient who, after a period of improvement, goes backward-without

the index, how shall one know where the mischief lies, with the tubercular process or with the mixed intection? If one is treating such a case with tuberculin and autogenous vaccines, how manifestly unsafe it would be to administer either without a knowledge of which serum is called for. I wish to emphasize the danger of giving any bacterine without proper control. Aside from the danger of promiscuous dosage, there exists that of creating a critical negative phase, and either may be appalling, as any one who works in the dark may, at any time, find out to his sorrow.

The same contentions hold true in the surgical infections, particularly those caused by such organisms as the micrococcus catarrhalis, the pneumococcus, the gononoccus, the bacillus coli and the streptococcus pyogenes, and, with special emphasis, the acute septicaemic infections.

My experience regarding the value of the index in typhoid is not extensive but from what has been observed, the following notations have been made: At the commencement of the infection the index is low and it remains low during the pyrexia, rising in response to vaccine inoculations to 0.9-1.0, but rarely going higher. It is an indispensible guide to the time for inoculations. Indices should be taken daily, since the phases following inoculations appear to be brief. At defervescence the index rises to 1.5-2.0. The height of the temperature and the clinical aspect of the patient are not criteria of the quantity of protective substances in the patient's serum.

CARL C. WARDEN.

SCHOOLS IN THE OPEN.

Over-heated rooms and closed windows are far worse for children than it would be to have no schoolrooms and have all instruction ; iven practically in the open. This statement applies particularly to the Pacific Coast.

In London, which is 900 miles farther north than New York City, the County established Council have open-air schools that continue five months, beginning May I. These schools are located in Plumstead, a London suburb. The cost of feeding the children was 70 cents per week for each child. In last year's experiment, every child was benefited physically, and the improvement was greater than could have been anticipated. The children were suffering, in the main, from the debilitating conditions which arise from city life. The commonest ailments were anemia, enlarged cervical glands, adenoids, and hypertrophied tonsils. Children who were admitted suffering from active disease, showed gratifying improvement. Dr. Sears, the medical officer, in his report says: "The general effect of the open-air school life on the children was easily discernable in their improved color and less restrained demeanor. seemed brighter and more full of spirits at the end of the school day than at their commencement. Their movements were brighter and their intellects were keener as a result of their attendance at the school."

Cities such as Los Angeles, San Francisco, Portland and Seattle, could well afford to establish suburban outdoor camping schools for children who are backward owing to anemic conditions.

There should be rules in all city schools in regard to open windows and maximum temperature. In fact, in a climate such as that of California, the children would be better off three-fourths of the school year if their instruction was given out of doors. Put up shed roofs in a few school yards and try it.

THE SURGICAL RIGHTS OF THE PUBLIC.

In an address on this subject by Dr. John C. Munro of Boston, delivered before the Canadian Medical Association on June 10, and published in the Boston Medical and Surgical Journal of August 20, we have probably the ablest discussion of the vital problems with which it fearlessly deals, that has ever been presented to an English-speaking audience. No man in this country is better fitted to discuss these problems in fairness and candor than Dr. Munro, and his address is commended to the profession not only as the loftiest expression of one of the greatest minds in American surgery, but as expression of the best constructive reform in modern practice.

We shall not attempt to review this address further than its cordial commendation to those who have not read it. We have many situations here in California with which the paper deals in a general way, and for which the gifted author suggests a reasonably remedy. The cogency of his arguments and the feasibility of the suggested reforms will appeal to every man whose motives are upright and sincere.

There are certain conditions local to California, however, with which those

who live here are best acquainted and are endeavoring to intelligently meet. For sometime the impression has gone abroad that the State Board of Medical Examiners of California was a body of gentlemen holding an avowed prejudice in behalf of the public against the graduates of medical schools, not only outside the State, but some of those within its borders. Notwithstanding the fact that the personnel of the board has changed from time to time, the belief in the board's bias still persists in certain quarters. The writer has never been connected with the State Board nor with a medical college in California, but he has constantly believed, and now believes, that the various State Boards, including the present one, have been actuated by the very best motives in this service—a service which is a very considerable personal sacrifice in behalf of the medical applicants for license, and the public to whom they owe a protective guardianship.

It is but fair to presume there have been from time to time men on the Board whose scholastic attainments failed to measure up to other valued qualifications, which in the judgment of the appointing power were equally important. The same fact might be urged against some of the men constituting the teaching force in our medical schools. We should be patient, fair and reasonable.

The public has surgical and medical rights which the State Board have conscientiously tried to defend. They have tried to defend the public against a certain illiteracy which does exist, both amongst those who are regular grad-

uates of medicine, and very obviously amongst those who are not.

What is most needed now is a united faith in the State Board and in the faculties of our schools, who are severally striving for higher standards and requirements from graduates and students. It is absurd on the face of it to impute to such bodies of representative men motives other than the most worthy, or an attitude which would draw down on them the obloquy of the public. These men are conscientious, self-sacrificing, and to a large degree, most capable.

But it is equally idle and unsafe for our medical schools to be blinded by a self-sufficient confidence that what they are now accomplishing in academic requirements and in didactic and clinical instruction, is the best that can be done, or all that the people have a right to expect of them. There is a growing intelligence amongst the laity as to what should be expected of a modern surgeon or physician, in training and facility for the best work. We should not require this spur toward studious habits. But is is growingly insistent, and it is certain to result in permanent detriment to the profession, if its admonitions are passed unheeded.

The public has a right to demand three things of us: (1) An increasingly higher intellectual qualification in the members of the State Board. (2) A better preparation and a more consistent devotion to their professorial duties of those who teach in our medical schools. (3) A decidedly higher academic training in the candidates for medical instruction and the degree,

A. S. L.

ANENT THE MEDICAL LAW AND EXAMINING BOARD OF CALIFORNIA.

In order to protect the health and lives of the people, laws regulating the right to practice medicine and surgery exist in the different States of the Union.

If only competent physicians sought to hold themselves before the public as capable of intelligently and safely treating injury and disease, there would be no need for such medical laws or for medical examining boards.

However, as many incompetent persons do pretend to the public that they have proper medical qualifications, and because the lay people themselves, through lack of basic knowledge, are not in a position to intelligently discriminate and choose the competent from the incompetent physician, the different States of the Union give to physicians of known reputation, the right to pass judgment on the qualifications of those of their fellows who aspire to practice the healing art.

Unfortunately, the laity, our legislators, and even many of our own profession, fail to realize that the ideal way of determining the qualifications of a medical applicant, necessitates much painstaking work and time from the examiners.

In our medical practice laws as they now exist, we make provision for examing boards, but neglect entirely the matter of adequate compensation. Our examiners are asked to neglect their private practice and become servants of the State and work like slaves, all for love of the public. The pittance received by them hardly pays their railroad ex-

For their onerous services, they do not receive the gratitude of either the State, the people, or of their own profession. Instead, harsh criticism is passed on them for every error of judgment, and often for every example of adherence to principle and to the law.

What an utter absurdity, to ask busy men, with the demands and responsibilities of private practice upon them, to leave their private work for more than four days at a time, for several times a year, to labor without financial reward or the gratitude of esteem, in order that every applicant for a license may have an extra good chance to show that he is prepared to practice medicine!

What other group of men do this? None. Why then demand so much of our own fellows?

We realize that the pressure and value of time necessitates at present a type of examination of applicants by no means ideal. On this account it is doubly unfortunate for the law, the board, the profession and the people, when through either carelessness, lack of foresight or tact (or even for worse, what rarely exists) through lack of a high sense of honor, an examiner or examiners allow applicants with justice to cast reflections on the capacity, fairness or integrity of the examining board and of its examiners.

And yet when we consider the altruistic nature of the services demanded of examiners, and their slight reward in the esteem of their fellows, and the immense pressure brought on them from all sides, by applicants who seek "spe-

cial and individual favors," the wonder is not, that there should occasionally be a basis for just criticism of examiners, but that this basis for such criticism should exist as rarely as it does!

We have made these comments because in our own State of California, the medical practice act and the board of medical examiners have almost from the beginning (in 1901) been storm centers of harsh criticism and newspaper notoriety.

Now let no man be deceived by all this. It is safe to say that in fifty to seventy-five per cent. of the cases of rejected applicants there was absolutely no basis for just criticism. Among the remaining applicants there may have been, perhaps, in some instances, a fair ground for such criticism.

But let such few applicants consider that their rights as individuals are not paramount to the rights of the people or of the profession as a whole. such applicants fall below the 75 per cent. standard, that in itself is evidence that they were on the border line of our only present means of determining competency. Let all such again turn to their books and prepare anew for a test in which they can render, if they so desire, a good account of themselves, instead of assailing the only means the people of this great State have, of keeping out the flood of arrant quacks and shysters, who even in spite of the law, have waxed sufficiently strong to bid defiance to it, in some cases.

We regret exceedingly that our Board of Medical Examiners continues the plan of allowing each examiner to make his own list of ten questions, without subsequent suggestion or revision by the Board as a whole, although the law contemplates the examination to be given, not by individuals, but by the whole Board. It is this individual method that has allowed unfair questions to creep into the examination lists. And it is this method, through allowing such unfair questions to creep in, that has made the California board a storm center of criticism, not only in our own State, but throughout the country. What a pity, that so beneficent a law as that which we have, should be brought into disrepute and made the subject of recurrent newspaper notoriety and scandal, simply because the examiners lack the tact to take the one little step that will do away with 75 per cent. of the legitimate criticism that has been showered at the Board!

The mass of our profession believe in the present law, and are its supporters, first, last, and all the time, but this stubbornness and seeming unwillingness or lack of foresight and judgment on the part of some of the examiners, to conduct the examinations on eminently fair lines, is what hurts, and at times, disgusts the profession.

Every intelligent practitioner of our noble profession must be a believer in a medical practice act. There can be no discussion of this fundamental point. Every man, who, for theoretical conceptions of what he construes to be "personal liberty," would open our State and allow our lay citizens to be victims of the medical shysters and grafters and illogical theorists who would overwhelm us, would by such action degrade our

profession and practice a gross wrong on our people.

Instead of more lax laws, let us stand shoulder to shoulder for better laws! Let us fight for ample preliminary and adequate professional education of all who profess to practice the healing art, no matter by what ism or pathy.

What have we or the people to do with schools and modes of treatment? If the practitioner be intelligent and honest, if he has had ample preliminary education (this today, of our present graduates, should mean a four-year high school education, sufficient for entrance into our State University) and if he has had ample professional education (this should mean at least thirty-two months of medical education) then we may allow the people to choose for themselves their own doctors.

For then we would have fulfilled our obligation to provide the people with well trained and safe physicians.

We regard it as a great advance forward to have the major "schools" of medicine all represented on one medical board. If the osteopaths of this State would agree to subscribe to the full high school education as do the regulars, the homeopaths and the eclectics, instead of only a common school education, as they now do, our law would then be just to all, fair to the people, and bound to elevate the practitioners of the healing art of all schools to a high plane. We know that there are Osteopaths who desire this and believe it will soon come to pass.

We believe our present law will be most harshly assailed during the coming meeting of the Legislature. Let every high-minded practitioner stand firm in its defense, or in defense of a better law. Let no man who loves his profession or who has a real desire to safeguard the interests of the public, consent for a moment to a laxer law, or to multiple examining boards. We would assail all such efforts as coming from persons with selfish motives or illogical conceptions of personal liberty.

For what is at stake is not "the right of the medical graduate to practice where he pleases," as it is that far greater and more fundamental right of the whole people of the State, that "none shall have the right to practice the healing art except duly qualified persons."

A law on the lines of our present medical act of California is the only kind of law that will safeguard the rights of the people and of the profession in these respects.

Let us be careful not to be used as tools for those who have selfish or whimsical designs on that law.

And let every man of us stand shoulder to shoulder so that our legislators may know that the medical practice act must not be changed except, perhaps, to make it better and broader in its applications.

This is the business of every man who loves his profession and who would give of his best in its defense. Let the humble practitioner give what he can, and let those of our guild who through their ability and fortune have become prominent before the people, also give in proportion as the people and the profession have given to them.

The coming session of the Legislature must be constantly watched if the vicious bills which aim at the emasculation or nullification of our present medical law are to be killed. There is need, urgent need, of earnest and intelligent co-operation. We repeat, let no man fail to do his part in proportion to his influence and his means.

G. H. K.

EDITORIAL NOTES

Dr. T. J. Pugh has been appointed a physician to the Fort Yuma Indian Schools.

Dr. J. D. Petit has purchased the Carlsbad (New Mexico) tuberculosis sanatorium.

Dr. Stanley P. Black has opened a Pathological Laboratory in the Union Trust Building, Los Angeles.

Dr. R. N. Looney, of Prescott, is enjoying a two weeks' vacation shooting deer in the Wenden country.

Dr. A. T. Hembree has located in Redondo, succeeding Dr. E. H. McMillan, who becomes a resident of Pasadena.

Reports from Dr. Frey, of Davos Platz, apparently justify the use of Marmolek's serum in suitable cases of tuberculosis.

Dr. J. M. Diaz, of Santa Fe, New Mexico, has returned home from New York City, where he spent a few weeks in hospital work.

The International Typographical Union have appropriated \$10,000 to establish a tent sanatorium for the tuberculous in Arizona.

Dr. A. T. Newcomb has been elected President of the Pasadena Medical Society, with Dr. J. E. Janes (of course) as Secretary-Treasurer.

Dr. Elmer E. Stone, Superintendent of the Hospital for the Insane, Napa, was operated on for appendicitis October 27. He made prompt recovery.

Dr. Rupert Blue, of the United States Public Health and Marine Hospital Service, recently delivered a very important popular address before the citizens of Santa Barbara.

Dr. Smith Ely Jelliffe, the alienist, has retired from the co-editorship of the *New York Medical Journal*. Dr. Frank P. Foster remains, as heretofore, the editor-in-chief.

At the November session of the District Court at Prescott, the grand jury failed to find a true bill against J. A. Enriquez, of Jerome, for practicing medicine without a license.

The Yavapai County Medical Society will devote all its December meetings to a study of the medical and public health laws of the Territory, and how they can be better enforced.

Dr. C. A. McQuiston, formerly president of the Board of Health of San Francisco, proposes to begin immediately the building of a great sanatorium in Lower California.

The Maricopa County Medical Society is planning to hold weekly meetings for the purpose of taking up the post-graduate course for county medical societies as outlined in the *Journal of the A. M. A.*

Col. George H. Torney, now in charge of the hospital at the Presidio, San Francisco, has been appointed Surgeon-General of the Army to succeed Robert M. O'Reilly, who reaches the age limit January 14.

Dr. John Gordon Wilson has resigned from the faculty of the University of Chicago (Rush) and accepted the position of Professor of Otology in the Medical College of the Northwestern University.

The new operating room of the Sisters' Hospital in Phoenix is nearly completed. It will be one of the most complete and best equipped in the West. The furnishings were selected by Dr. Craig while East on his summer vacation.

Dr. Melville L. Loomis of Los Angeles has accepted the medical superintendency of the beautiful hospital at Santa Monica. Dr. Loomis graduated from the College of Medicine of the University of Southern California, class of 1900.

Dr. P. M. Carrington, who has been making history for the last eight years as commander of the Tuberculosis Sanatorium of the Public Health and Marine Hospital Service at Fort Stanton, New Mexico, has been transferred to San Diego, California.

Dr. Henry William Mills and Miss Ortencia Velarde, both of San Bernardino, were married Monday, November 9. Dr. Mills graduated from the Royal College of Surgeons, England, class of 1903, and has been practicing in San Bernardino for five years.

Sunbrights California Food (partially dextrenized California barley flour) is steadily gaining favor with the profession. The increase in consumption of Sunbrights, for the three months ending October 1, 1908, over the preceding three months, was 116 per cent.

Dr. John Evelyn Page has resigned from the navy to be resident physician of the Potter Hotel, Santa Barbara. The San Francisco Globe says "this is a disappointment to San Franciscans, who had hoped to have the doctor as a permanent resident."

Dr. B. McIntyre has located in El Centro, Imperial County, California.

Dr. W. A. Bayley, College of Medicine of the University of Southern California, class of 1905, who is surgeon to the Phelps-Dodge Company, Dawson, New Mexico, has been taking a three months' post-graduate course in the hospitals of New York City.

The patrons of the Barlow Medical Library held their annual meeting at the library, 738 Buena Vista Street, Wednesday evening, November 18. The report showed that in the ten and one-half months ending November 15, 1908, there had been 2023 physicians and medical students using the library; a gain of 37 per cent. over the number for the same time in 1907.

Dr. Maud Mackey, who graduated from the College of Medicine of the University of Southern California, class of 1898, is visiting the family of Rev. W. S. Young, 573 South Boyle Avenue, Los Angeles. Since her graduation Dr. Mackey has been medical missionary in China. She has had some narrow escapes from assassination, and is now taking her first vacation.

By the construction of the new road from Oak Cliff to Idyllwild, completed December I, the stage trip from Hemet to Idyllwild has been shortened four miles. The trip is also much more picturesque than by the old route, and the steepest grade does not exceed IO per cent. The beautiful road from Idyllwild to Banning is now within seven miles of completion, and will probably be finished by June I.

A Riverside County physician complains that a Mrs. J. R. Robertson is practicing in that county without a license. We beg to refer him for advice to Dr. King, of Banning, who has done such excellent work on our State Board of Medical Examiners. The complaining practitioner says: "Is it right to

allow this woman to continue her practice without a license, when the rest of us have to stand our examinations and pay our money?"

Drs. J. M. Swetnam and J. A. Ketcherside, of Phoenix; C. B. Adams, of Seligman; E. S. Miller, of Flagstaff; G. A. Bridge, of Bisbee; A. L. Gustetter, of Nogales, and A. R. Hickman, of Douglas, spent a very pleasant two days in Prescott, November 17 and 18, attending the Grand Lodge, A. F. and A. M., of Arizona, and assisting at the dedication of the new Masonic Temple. Drs. Gustetter and Hickman afterwards visited the Grand Canyon.

Dr. William Hill Grafton died in Los Angeles, November 8. Dr. Grafton was born in Baltimore, March 25, 1827. He graduated, as honor man, from the University of Maryland, class of 1849. In the course of his long and useful life he had been resident physician at Bellevue Hospital, New York, and quarantine officer of the city of Baltimore. He was a prominent member of the Methodist Episcopal Church. His remains were cremated.

The Yavapai County Medical Society, on the invitation of the board of school directors, gave a "talk" on tuberculosis to the pupils of the higher grades of the Prescott schools on the evening of November 30. The society also provided a tuberculosis exhibit illustrating the most modern methods of prevention and treatment. Microscopical specimens of the tubercle bacilli and of tuberculous lung were shown. The meeting was a most interesting one and should have a good effect.

Dr. C. LeRoy Lowman, formerly of the California Hospital, Los Angeles, is now assistant in the Orthopedic Department of the Massachusetts General Hospital, Boston. When not busy there, he spends his time at the Carney Hospital, where he sees good work in the Foot Clinic, especially in flat foot, weak foot, faulty weight bearing conditions, posture, etc. He also spends four hours per week at the Boston Children's Hospital watching particularly spinal curvature cases and their treatment in the Special Corrective Gymnasium.

In his lecture at the International Congress of Tuberculosis on the decreased mortality from tuberculosis in England, Dr. Arthur Newsholme made the statement that I per cent, of the population live in institutions—hospitals, poorhouses, asylums-and that, in some cities, over one-quarter of the deaths from consumption were reported from hospitals. The removal of these patients, generally the very poor, from their homes when in the advanced stages, removes many foci of infection, and has been one of the factors in lessening the mortality.

The Southern California Medical Society held its fortieth semi-annual session at Santa Ana December 2 and 3. Drs. C. D. Ball, H. S. Gordon and John Wehrly were the Committee of Arrangements, and to them belongs much of the credit for this very successful meeting. It was a great pleasure to meet Dr. M. F. Price, the first president of the society,

Officers were elected as follows: President, Dr. F. R. Burnham, San Diego; First Vice-President, Dr. C. D. Ball, Santa Ana; Second Vice-President, Dr. J. M. Holden, Long Beach; Secretary-Treasurer, Dr. J. M. King, Los Angeles.

The banquet was a delightful success. It closed with Dr. Lobingier's response to "The Ladies," and while no man has ever done that subject justice, yet the doctor's eulogy was heartily applauded.

On the recommendation of the Executive Committee the next place of meeting will be Long Beach, the time next May.

Dr. D. K. Pearson, the great philanthropist of Chicago, is visiting Southern California, and while here is taking 2 much needed rest at McBride's Sanatorium. Pasadena. Dr. Pearson was born in Bradford, Vermont, April 14, 1820. He graduated from that good old medical college at Woodstock, and practiced for years in Chicopee, Massachusetts. Through wise real estate investments in the Middle West he became very rich, but goes on the principle that he only holds the money in trust for the benefit of his fellow-man. He has given over three millions of dollars to colleges and hopes to distribute as much more. He will stand forth in history as a noble exemplar for all rich men.

Needles, California, is said to be the most healthful place in the world. It is true the Santa Fe Railroad has a hospital there, but it is only for scalds and broken bones. Last summer the surgeon in chief, Dr. Freeman, wanted to give the assistant surgeon a three months' vacation, so he accepted the services of the local undertaker. undertaker played fair, for during the whole three months he was acting as assistant surgeon there was not a single death in the town. Speaking of the kindness of undertakers, we recall the language of Charles Dickens, when, in describing Paul Dombey's christening, he says: "Presently the clerk (the only cheerful-looking object there, and HE was an undertaker,) came up with a jug of warm water."

Dr. Edward S. Godfrey, Jr., of Tucson, Arizona, has been appointed Territorial Superintendent of Public Health, to succeed the late Dr. Coleman. Dr. Godfrey is a graduate of the University of Virginia of the class of 1900. He came to Arizona in 1903 and opened offices in Bisbee where he practiced until a few months ago, when he moved to Tucson. Dr. Godfrey has always been

very active in medical society matters, having served for three years as secretary of the Cochise County Medical So-He is well versed in Public ciety. Health matters, to which he has devoted considerable attention during the past few years. The appointment is a particularly good one. There is an immense amount of work to be done in the office, and Dr. Godfrey is well equipped to perform it. If he gets the support he deserves from the medical men of the Territory he will, without doubt, accomplish much for the well being of the people of Arizona,

Surgeon-General Walter Wyman sends us "Transactions of the Sixth Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine Hospital Service." This volume contains much that is of interest, Assistant Surgeon-General Kerr submitted proposed Interstate Quarantine Regulations which begins by saying: "For the purpose of these regulations, the communicable diseases are cholera, vellow fever, smallpox, typhus fever, leprosy, plague, scarlet fever, measles, diphtheria, typhoid fever, and pulmonary tuberculosis, and are subject to quarantine surveillance. For the purpose of these regulations five days shall be considered the period of incubation for cholera; six days for vellow fever: fourteen days for smallpox; seven days for plague; seven days for scarlet fever; fourteen days for measles; four days for diphtheria; while in leprosy the period of incubation is unknown." Physicians who desire a copy should address a request to Surgeon-General Wyman, Washington, D. C.

Dr. P. O. Sundin, formerly resident physician of the California Hospital, Los Angeles, and more recently Chief Surgeon of the Yellowstone Hotels, is now in the New York Infant Asylum, 161 West Sixty-first Street, New York City.

Dr. Sundin, under date of November 20, in a personal letter, says: does not find half enough time in New York. As to medical material and enjoyment-well, a stranger is like a bee in a barrel of honey. It certainly is a treat to meet, hear and see the work of the great Eastern specialists. I had not formed an idea of the number of operations one man could do in a day. As to the hospitals, which I have seen in New York and other cities, and what to me was a revelation, is the favorable comparison that the California Hospital makes as a whole. During a recent infection I was temporarily transferred to the leading private hospital in New York. The care and comfort in their \$65 per week rooms was not superior in comfort and service to the \$40 per week rooms in the California Hospital. The New York Infant Asylum originated as a place for foundlings. Later a department for unfortunate girls was added. They now take in pay maternity cases of any description. In addition, it is also the supporter of the obstetrical department of Columbia University Medical College. There are about one hundred anti and post-partem patients here regularly. Also as many babes. While 800 are boarded out. There is a great deal of degeneracy and specific among them, which makes experience among them of great value. My position is substitute junior house. Have had as many as nine obstetrical cases in ten hours."

A Scotch physician, recently returned to California from a visit to his native heath, says he was so disgusted with the universal drinking that was in vogue that he took a mental pledge to never take another drink. Previous to his trip he was reasonably fond of mountain dew. He is six feet and an inch in height, but when he was a young man there were many of his friends one and two inches taller. On this visit he only saw four men

taller than he. The tall men seem to have almost all emigrated.

"But if, O Lord, it pleaseth Thee

To keep me in temptation's way, I humbly ask that I may be

Most notably beset today;

Let my temptation be a book,

Which I shall purchase, hold and keep, Whereon, when other men shall look

They'll wail to know I got it cheap."

The church is taking great interest in the Emanuel movement. Is it suggestion or Divine healing? Rt. Rev. Bishop Conaty, of Los Angeles, recently said: "Prayer and the sacraments have been the great means always depended upon by the church in the moment of sickness. We should never forget that we are the children of a good God and that the prayer of faith helps the sick men and the sacraments of Christ's church of themselves bestow special blessings, not only on the soul, but also on the body. They convey the blood of Christ to the soul of the Christian; they blot out sin and strengthen the love of God and we know what a part sin plays in the ailings of human kind, so that the influence of religion, allied with the skill of the physician, combine to make the strongest influence which can be brought to bear upon the sick in their relation to health."

Dr. Jno. C. King of Banning made an eloquent and illuminating address on medical legislation to the members of the legislature from south of the Tehachepi at the Chamber of Commerce building, Los Angeles, December 8th. Dr. King spoke of the origin and necessity of medical examinations and urged that the present law be preserved. Hon. Richard Melrose of Orange County presided and Senator Thompson of Los Angeles County was secretary of the meeting.

BOOK REVIEWS

MEDICAL GYNECOLOGY. By Howard A. Kelly, A.B., M.D., LL.D., F.R.C.S. (Hon. Edinb.) With 163 illustrations, for the most part by Max Broedel and A Horn. New York and London. D. Appleton & Co., 1908.

That the ideal general practitioner should be a man of wide culture in his profession, in close touch with all the specialties, is an opinion of Kelly's with which the reviewer is in hearty accord. The time has come to review from a new and advanced standpoint the relationship of gynecology to the field of general practice. Kelly's idea is that the evolution of scientific medicine must ever run this course: The general practitioner yields up to a little group of investigators that portion of his territory which is most obscure, in which he has made the least progress; the field is diligently cultivated and a specialty is formed. Then in time the specialist so simplifies the etiology, the diagnosis and the treatment, that he is able to hand back a part, at least, to the general practitioner, with whom he continues in relations of harmony and sympathy, so that both work conjointly to a common end, namely, the extinction of disease and the amelioration of its ravages. It is his endeavor in this work to review the field so that he may return to the general practitioner that portion of it which he ought to recover by right of his prior lien.

I know of no more commendable work than this, as during the almost thirty years of my practice I see no more disastrous results in the female pelvis than that attendant upon the manipulation of a badly informed general practitioner in a special field of medicine.

A curettage of the uterus under these circumstances has many times caused sterility, or years of helpless invalidism, or has even cost the woman her life.

Kelly's book will inform the general practitioner of that which he may do with safety, and how he may do it, and it will prevent much suffering and save many lives, by preventing meddlesome and unskilled gynaic manipulations. Fate will also be kinder to the cancer patients who early fall into the hands of the well-equipped general practitioner, when there is still opportunity for early radical measures to prove successful.

The book opens with two very valuable chapters to the general practitioner. First, the consulting-room, its appointments and the manner and methods of making a gynecological examination and properly recording it; the last is not the least important by any means. Second, the hygiene of infancy and childhood in which is given the attention that the importance of the subject demands.

Then follows a full, scientific, but withal a practical presentation of a subject that enters into the daily life of every general practitioner in the world. He may pin his faith to this book; it is safe, sane and sound.

As an illustration of this saneness and soundness, we wish to quote this paragraph: "The constantly increasing number of gynecological operations during the last twenty years has taught the medical profession many things in connection with them which were not at first understood. One of these facts is that an uninterrupted immediate convalescence, after a major, or even a minor operation, does not necessarily imply the immediate and complete recovery of perfect health on the part of the patient. A period of months, and in many cases of a year or more, must often elapse before the woman who has been relieved of a serious pelvic affection really reaches normal health once more."

If the general practitioner will so warn his patients, before sending them to the gynecologist, much mental suffering will be saved.

W. A. E.

A TEXT-BOOK OF DISEASES OF WOMEN.
By Charles B. Penrose, M.D., Ph.D.,
formerly Professor of Gynecology in the University of Pennsylvania. Sixth Revised Edition. Octavo of 550 pages, with 225 original
illustrations. Philadelphia and London: W.
B. Saunders Company, 1908. Cloth \$3.75 net,
half morocco \$5.25 net. For sale by Fowler
Brothers, 543 South Broadway, Los Angeles.

This book has won for itself a distinct place in the student's library, and in the working kit of the busy practical doctor. It presents the best teaching of modern gynecology and avoids confusion by presenting but one plan of treatment for each disease. facts of anatomy, physiology and pathology which may be found in the general text-books have been omitted, this simplifies the text very much and only when certain facts in pathology, that are peculiar to the disease under consideration are required for elucidation is any mention made of pathology. glad to see that the Goodell and Sims specula are alone advised; after all these years, and after so many attempts at improvement, these are the only really useful ones that we possess. The reviewer would be at a serious loss without them and without Goodell's uterine dilators, also endorsed by Penrose. So also do we note with pleasure the condemnation of the uterine sound; all of us have seen disastrous results following its use in unskilled hands.

We doubt if the disease Kraurosis vulvae is as rare as Penrose considers it; we have reported a number of cases, some in the Southern California PRACTITIONER of December, 1895. agree that the treatment is unsatisfactory and operative measures will fail unless all the affected tissue is removed, sometimes a difficult or impossible task. There has recently been an attempt to dignify adhesions of the clitoris by highsounding articles in the journals into important pathological condition causing many ills in the female. Adhesions between the glands of the clitoris and the prepuce, or hood, is exceedingly common, but we agree with the author that they rarely produce symptoms, and that their surgical treatment is an exceedingly simple matter.

The silk carrier for sutures is a very valuable device, but the illustration on page 66 is of little value, certainly no one could so thread a needle by receiving instruction alone from this picture, no explanatory text accompanies it.

The chapters on the anatomy and mechanism of the perineum, injuries of the perineum, and their results, are clear, well written and of great value to the student.

While the indications for the use and introduction of the pessary for the correction of retroversion are most lucid, it would seem safer to the reviewer to add a little more stress, in a book for students, upon the contraindications to its use. But about twenty lines are devoted to this most important matter.

Happily, Penrose considers the field of Alexander's operation to be very limited, we hope that in later editions he will relegate it to the antiquated theories that he refers to in his preface.

Ventro-suspension is the operation recommended for retrodisplacement; round ligament suspension, the Gilliam operation, is not mentioned, as Penrose, after operating more than three hundred and ten women, by ventro-suspension, is entirely satisfied with that method.

Undoubtedly many failures in the operation of trachelorrhapy are due to neglect of preparatory treatment. Penrose often devotes two to six weeks to the preparation of the cervix for operation, and in our judgment the time is well spent, as we often see women in whom the symptoms persist after operation because of faulty preparation and defective technique. If the inflammatory changes secondary to laceration have become so deeply seated that the preparatory treatment does not relieve them, amputation of the cervix is, in Penrose's judgment, demanded. He has

selected the best operation that we know of for this purpose, and his description of it is very apt.

That the author has not been carried away by fads of therapeutics or pharmacy is clearly shown on pages 170 and 171, where we find mixtures and combinations taught us thirty years ago by the distinguished Goodell, the first man in the United States to hold the title Frofessor of Gynaecology.

Space is given to the very interesting cases of congenital split and erosion of the cervix, a condition not well recognized by the mass of the profession.

Penrose thinks that cancer of the uterus is more favorable for surgical attack than cancer in most other parts of the body. While this to a certain extent is true, the record of radical cure in cancer of this organ is not a brilliant one for gynaecology, he wisely advises total removal even when the growth is small apparently confined to the cervix, else the disease will speedily extend to structures that are surgically inaccessable. Cancer has recurred in an ovary after removal of the uterus.

Chorio-epithelioma, or syncytioma malignium, does occur in women who have not been pregnant, and even in young girls; the author states, however, that it is a peculiar growth of the uterus which occurs after pregnancy. Stress is properly laid upon the occurrence of cancer in the endometrium of the fibroid uterus. Penrose thinks that we cannot yet say positively that the fibroid favors the development of the cancer, but it seems probable that the diseased endometrium that accompanies fibroids furnishes a place of diminished resistance for the development of malignant disease.

We endorse the statement that the great majority of fibroid tumors of the uterus demand immediate operation, and that many women today are driven to the operating table after lives that have been wasted by the expectant plan of

treatment; also the statement that the treatment by electricity, once popular with some physicians, has not stood the test of time and experience. It does not stop the growth of the tumor. It has caused many deaths, and may produce peritoneal adhesions, which render subsequent operations most difficult.

The chapter on the methods of examing the bladder and urethra needs revision; it is hardly up to date. The technique of abdominal operations as applied to the preparation of the patient, seems a little severe in the light of today's procedure, for example: "The patient should have a warm bath from head to foot upon the morning of the operation. The abdomen, from the ensiform cartilage to the pubis, should be scrubbed with a nail brush."

The chapter upon the effect of the removal of the uterine appendages, could with propriety, in a book written for students, be much amplified. It is a tremendously important subject and is fraught with momentous consequences to the individual who must loose her chance for maternity, or suffer a surgical menopause with all its attendant discomforts. There is no better book in any language for students and young practitioners than this text-book of Penrose's.

W. A. E.

GYNECOLOGY AND ABDOMINAL SUR-GERY. Vol. II. In two large octavos. Edited by Howard A. Kelly, M.D., Professor of Gynecologic Surgery at Johns Hopkins University; and Charles P. Noble, M.D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 862 pages, with 475 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company, 1908. Per volume: Cloth, \$8 net; half morocco, \$9.50 net. For sale by Fowler Brothers, 543 South Broadway.

The first volume of this admirable book was reviewed in the SOUTHERN CALIFORNIA PRACTITIONER for February, 1908, and this is a fit companion to the initial volume. The list of contributors remains the same, with the addition,

however, of Stephen H. Watts of the University of Virginia.

The opening chapter by G. Brown Miller on the complications following operations is one of the most carefully prepared brochures in the literature, except that post operative adhesions do not receive the space that their importance merits, they are the bete noir of modern surgery.

Ross, of Toronto, writes the chapter on Cesarean section and Porro-Cesarean section, a careful review of the entire subject and a painstaking record of some of the writer's own cases.

In these days of venturesome and radical surgery, the article by Norris of Philadelphia on operations during pregnancy is very timely. In regard to appendicitis in the pregnant woman, Norris's article shows that early diagnosis and operation are essential, and if the surgeon is to err it had better be on the side of safety rather than to wait for the unmistakable signs of perforation and abscess. Delay may change a relatively trivial complication of the pregnant state into a disaster.

It has not been proven, as Frerichs states, that pregnancy predisposes to cholelitheasis, but it certainly is a fact that an early operation, as in appendicitis, is more urgently demanded during pregnancy than at other times. So with dental operations, as Oakman tells us, it is very unwise to allow a pregnant woman to suffer from neuralgia, odontalgia, alveolar abscess, carious bone, or diseased antrum. How different is this teaching from even ten years ago, and how much more correct it is,

Hirst, of Philadelphia, always writes a good article, and we regret that more space was not allotted him for the very important subject of Operative Treatment of Sepsis in the Child-Bearing Period; as far as it goes it is without a flaw. Extra-Uterine Pregnancy has been wisely allotted to J. Whitridge Williams, and he has made a classic of

the article which is accompanied by a full and satisfactory bibliography. Williams, we are glad to know, acknowledges the existence of an ovarian pregnancy, as we all should, since Thompson's case in American Gynecology, 1902. I. Williams has added twelve carefully studied cases of ovarian pregnancy from the literature. In four of the cases the foetus was still within the ovary, and in one it was connected with the interior of the organ by the umbilical cord.

Bloodgood's chapter on Disease of the Female Breast is based on a study of 1048 lesions of the female breast in the surgical pathologic laboratory of Johns Hopkins Hospital, and it opens with this truism in italics: "The problem in the treatment of every lesion of the female breast is early recognition of carcinoma and its removal by the so-called complete Halstead operation;" again, every single tumor in the breast of a woman over twenty-five should be considered malignant until it is proved to be benign.

The public should be educated to know that cancer of the breast is, in its onset, a local disease curable by a complete excision.

Bloodgood has confined his article to the two great practical problems? First, the clinical picture which will allow a diagnosis of carcinoma and justify the complete operation without an exploratory incision. Second, to give a clear description of the gross appearances of the benign and malignant lesions of the breast, so that they can be recognized at the exploratory incision when a positive clinical diagnosis cannot be made; as a corrollary to this follows the statement that the successful surgeon must be his own pathologist.

He who reads this article of Bloodgood's has a treat in store for himself, and he who studies it carefully will agree with me that it is one of the best articles on the subject that has ever been written.

The articles by Ochsner on operating upon the gall bladder, bile ducts and the liver, and Moynihan on operations upon the stomach, are, as we would expect them to be, most excellent even to the minutest detail. The ideal operation of Pyloroplasty is described by its originator, Finney of Baltimore; the text is clear and the illustrations are simply perfect, making the reading matter more readily understood.

The articles on Intestinal Surgery by Murphy, on Diseases of the Appendix by Kelly and Hurdon, are books in themselves, and put one in possession of all that is needed when desiring to become familiar with these important branches of abdominal surgery.

Opie writes on Surgery of the Pancrease, and Kelly on Operations Upon the Spleen. What more need we say? The closing chapters of the book are on Tuberculosis of the Peritoneum, by George Ben Johnston; Penetrating Wounds of the Abdomen, by Floyd W. McRae: Hernia, by Guy L. Hunner! Drainage in Abdominal and Pelvic Surgery, by Brooke M. Anspach; Surgery of the Ureter, by Kelly; and Surgery of the Kidney, by Noble and Anspach. No surgical or gynecological library is complete without this two-volume masterpiece. The book is thoroughly re-It makes us liable in every page. Americans proud of our confréres.

WILLIAM A. EDWARDS.

A TEXT-BOOK OF OPERATIVE SURGERY. Covering the Surgical Anatomy and Operative Technic involved in operations of general surgery. Written for students and practitioners. By Warren Stone Bickham, Phar. M., M.D.; Visiting Surgeon to Charity and Touro Hospitals. New Orleans. Third revised edition. Octavo of 1206 pages, with 854 illustrations, entirely original. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$6.50 net; half morocco, \$8 net. For sale by Fowler Brothers, 543 South Broadway, Los Angeles.

This ambitious work has gone into three editions in five years, which should be in a large sense a measure of its popularity. The compilation of a perfectly satisfactory work on operative surgery has, however, never been achieved in this country.

There have been numerous attempts. many of which have been rewarded by a fransient popularity and vogue, but all lacking in certain elements essential to the ideal work. It would be impossible in a brief review, such as the limitations of these pages require, to enter into the details of these defects. However, by way of illustration, here is an author whose experience and professional associations have been the very best this country affords, giving to the subject of Ambutations two hundred pages, or one-sixth of the entire volume. To the surgery of the liver he devotes fifteen pages; to the surgery of the gall bladder and ducts a like number of pages, and to the pancreas the generous number of of five pages! The reviewer trusts he will not be considered captious, if, in the presence of these illuminating facts, he calls the author's attention to the equally flagrant defection in the consideration of gastro-intestinal surgery. Methods obsolete for a decade are elaborately illustrated, and principles upon which later and improved techniques have been founded are not so much as considered. One looks in vain for even the slightest allusion to the epoch-making studies of Peterson in evolving the no-loop technique in gastro-enterostomy and its elucidation and earlier defense by Mikulicz and Moynihan.

We are sincerely impressed by the author's devotion and loyalty to his distinguished teachers, and he honors and dignifies himself and his work by his generous quotation of their principles. But the author of such a work has a large responsibility in the assumption, not only of his task, but with a liberal conversance with the literature of the world in operative technique. We are unwilling to ascribe to one of his opportunities a limited horizon or a preju-

diced vision. Rather let us consider the palpable defects in this otherwise excellent treatise as emanating from the lack of a due sense of proportion and easily to be corrected. For this work has the concept and substance of a great and distinguishing effort. Its author is eminently capable of making it thoroughly modern and representative of the best in our art. His publishers have certainly done their best for him, and the work as a whole is to be commended.

A. S. L.

THERAPEUTICS OF THE CIRCULATION. Eight lectures delivered in the spring of 1905 in the Physiological Laboratory of the University of London. By Lauder Brunton, Kt., M.D., D.Sc., LL.D., (Edin.), LL.D., (Aberd.), F. R. C. P., F. R. S. Consulting Physician to St. Bartholomew's Hospital. Published under the auspices of the University of London. Philadelphia: P. Blakiston's Son & Co., 1012 Wainut Street. 1908. Price, \$1.50 net.

The scope of this work can perhaps be better understood by quoting Lauder Brunton's own words in the beginning of the first of these lectures. He says: "The subject of these lectures is 'The Therapeutics of the Circulation;' the means by which we can put right anything that may have gone wrong with the circulation. If I were to hand my watch to any one of you and tell you that it was not going properly, you would naturally hand it back to me and tell me to take it to a watchmaker; because you know nothing of the way in which watches are built, of the disorders to which they are liable, or the way in which to put them right. In the same way before you can put anything right which has gone wrong with the circulation, you must know something about (1) its normal working, or physiology; (2) of the disorders to which it is liable, or pathology; (3) of the means by which we can act upon it, or pharmacology; (4) of the indications by which we recognize the particular disorder, or semeiology; and (5) the methods of applying our remedies to the disorders which we have already recognized, or therapeutics."

In the course of these, Mt Brunton has covered in a clear, concise manner, the above subjects, and illustrated them by many interesting cuts of practical value. It is well worth any one's time to read these interesting lectures and the simple mention of the name of the author should be a sufficient commendation of their value.

H. G. MARXMILLER.

THE MEDICAL RECORD VISITING LIST FOR 1909. Contents: Calendar. Estimation of the Probable Duration of Pregnancy. Approximate Equivalents of Temperature, Weight, Capacity, Mensure, etc. Maximum Adult Doses by the Mouth, in Apothecaries' and Decima! Measures. Dreps in a Fluid Drachm. Solutions for Subcutaneous Injection. Solutions in Water for Automization and Inhalation. Miscellaneous Facts. Emergencies. Surgical Antisepsis. Disinfection. Dentition. Table of Signs. Visiting List with Special Memoranda. Consultation Pactice. Obstetric Engagements. Record of Obstetrical Practice. Record of Vaccination. Register of Deaths. Nurses' Addresses. Addresses of Patients and Others. Cash Account. Prices of our regular lists: For 60 Patients a week, with or without dates, handsomely selected red or black, morocco binding, \$1.50; for 30 Patients a week, with or without date, same style, \$1.25. Also a few special 90-patient lists, \$2. Wm. Wood & Co., New York City.

ARTERIOSCLEROSIS. Etlology, Pathology, Diagnosis, Prognosis, Prophylaxis and Treatment. By Louis M. Warfield, A.B., M.D., Instructor of Medicine, Washington University Medical Department; Physician to the Protestant Hospital; Adjunct Attending Physician to the Martha Parsons Hospital for Children, St. Louis, Mo. Formerly Medical House Officer at the Johns Hopkins Hospital, Baltimore, Md. Member St. Louis Medical Society, Missouri State Medical Society, and American Medical Association, etc. With an introduction by W. S. Thayer, M.D., Professor of Clinical Medicine, Johns Hopkins University. Eight original illustrations. C. V. Mosby Medical Book Co., St. Louis, Mo. 1998.

This admirably conceived little work, so replete with that which is best and thoroughly modern in the consideration of the subject, will be instantly appreciated by the profession for its succinctness and lucidity. One seldom takes up a medical work which is not padded with useless and obsolete statistical tables or with data which is more or less worthless. To be able to present a subject in a style at once instructive and

exceptionally entertaining is an achievement worthy of any author's best effort. Dr. Warfield has accomplished this in unusual degree and placed the profession largely in his debt for this helpful contribution to the study of arteriosclerosis. Professor Thayer of Johns Hopkins writes the introduction. Altogether, the work is the most worthy of the monographs which have appeared in English on Arteriosclerosis.

DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS. By Jay Frank Schamberg, M.D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine, Octavo of 534 pages, illustrated, Philadelphia and London: W. B. Saun'ers C. muany, 1968. Cloth. \$3 net. For sale by Fowler Brothers, 543 South Broadway.

The author has several times before given the results of his study and experience in works of merit. This octavo volume of over 500 pages is his best offering, and its clear text and the photographic numerous illustrations with which it is embellished, mark it as a most useful and convenient handbook. Attention is called to the necessity of the dermatologist recognizing the rashes of eruptive fevers and cultivat. ing a discriminating diagnostic sense of the early manifestations of dermatoses and exanthems. The author has exhibited a very happy estimate of the relative importance of the various infections and the space each should occupy in its consideration. The bookmaking is of the very best, and this work is to be commended most cordially for those practical virtues which always appeal to the busy practitioner.

SURGICAL MEMOIRS. By James G. Mumford. M.D., Instructor in Surgery, Harvard Medical School; Visiting Surgeon to the Massachusetts General Hospital; Fellow of the American Surgical Association, etc., etc. Moffat, Yard & Company, New York, Illustrated; \$2.50 net.

In this volume of collected essays, Dr. Mumford reproduces many of his papers and addresses of the last ten years, and adds some material hitherto unpub-

lished. Mainly, the author deals with the history and philosophy of medicine. The first essay is a narrative sketch of the history of surgery, and embraces accounts of the great heroes of that art: Hippocrates, Galen, Vesalius, Haller, John Hunter and Lister, Then follows a paper, summing up ancient surgical accomplishments; succeeded by biographical essays on Cooper, Brodie, J. C. Warren, Bigelow. The remaining papers in the book are fugitive essays; accounts of special American achievements in medicine: a critical and historical essay on aneurism; addresses to nurses; and short papers on ethics and on medical education.

THE PRACTITIONERS' VISITING LIST FOR 1999. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Thumb-letter index. 25 cents extra. Descriptive or mar showing the several styles sent on request. Lea & Febiger, Publishers, Philadelphia and New York.

OBSTETRICS FOR NURSES. By Joseph B. DeLee, M.D., Professor of Obstetries in the Northwestern University Medical School, Chicago. Third Revised Edition. 12 mo. of 512 rages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth. \$2.50 net. For sale by Fowler Brothers. 543 South Broadway, Los Angeles.

This has become a standard work. It is useful for the nurse primarily, but may be also read with profit by the medical student and the average practitioner. The intelligent married woman can be safely trusted with it. This, the third edition, has been improved by certain additions to the illustrations, a description of Bier's treatment of mastitis and changes in the Glossary.

A MANUAL OF CLINICAL DIAGNOSIS.
By James Campbell Todd, M.D., Associate
Professor of Pathology, Denver and Gross
College of Medicine, Denver. 12 mo. of
319 pages with 131 text illustrations and 10
colored plates. Philadelphia and London;
W. B. Saunders Company, 1908. Flexible
leather, \$2 net. For sale by Fowler Brothers,
543 South Broadway, Los Angeles.

MANUAL OF OESTETRICAL TECHNIQUE as applied to Private Practice, with a chapter on Abortion, Premature Labor and Curctage. By Joseph Brown Cooke, M.D., Adjunct Professor of Obstetrics in the New York Polyelinic School and Hospital. Illustrated. Sixth Edition, enlarged and fully revised. Philadelphia and London. J. B. Lippincott Company, 1908.

This is one of those practical works that either practitioner or nurse can glance at with profit. While this is the sixth edition, it is all practically new, having been entirely rewritten.

GENERAL PATHOLOGY. By Dr. Ernest Ziegler, Professor of Pathological Anatomy and of General Pathology in the University of Freilurg in Beisgau; translated from the eleventh revised German edition (Gustav Fischer, Jena, 1905), edited and brought up to date by Alfred Scott Warthin, Ph. D., M.D., Professor of Pathology and Director of the Pathological Laboratory in the University of Michigan, Ann Arbor, Michigan; with 604 illustrations in black and in colors. Price \$5.50. New York, William Wood & Company, 1908.

Geheimer Hofrat Ernest Ziegler, Professor in the University of Freiburg, died November 30, 1905, age 57 years. This, his opus magnum, has passed through eleven editions and been translated into English, French and Italian. Professor Warthin, the editor, has inserted all recent investigations, bringing the work down to date. These interlardments include recent observations on the effects of Roentgen irradiation, heredity, phagocytosis, opsonins, blood plates, thrombosis, necrosis, cloudy swelling, fatty degeneration, calcification, regeneration, inflammation, malignant neoplasms, tuberculosis, syphilis, relapsing fever, spirochaltal and protozoa. Pathology is the entire science of disease, is the dictum of the author. He defines fatty degeneration as an infiltration of fat from outside into cells degenerating through the influence of poisons or other injurious agents (liver, heart-muscle, pancreas) or as a setting free of the invisible intracellular fat through atolysis (kidneys, spleen, muscle). A mild grade of fatty degeneration cannot be seen with the naked eye. The more severe forms give an opaque whitish color to colorless tissue. In the heart muscle the yellowish discoloration of fatty degeneration stands out very prominently ("tiger heart"). Every page is of interest, but the chapter giving "Theories of Inheritance" is of especial value.

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By Horatio Wood, M.D., LL.D., (Lafayette, Yale, Pennsylvania), Emeritus Professor of Materia Medica and Therapeutics in the University of Pennsylvania; member of the National Academy of Science. Thoroughly revised and rewritten by Horatio C. Wood, Jr., M.D., Associate Professor of Pharmacology in the University of Pennsylvania; Assistant Physician to the Philadelphia General Hospital, Fourteenth Edition. Clotn, \$5; sheep, \$6. Philadelphia and London, J. B. Lippincott Co.

Thirty-eight years ago Horatio C. Wood. Jr., M.D., L.L.D., placed before the profession of America a work on Therapeutics.

From the preface of that first edition. containing some five pages of wisdom and knowledge that could only emanate from a master brain, the reviewer wishes to make the following quotations: "At the present time, when the shelves of private and public libraries are groaning beneath their ever-increasing loads, when a thousand presses in every city send forth day and night their printed messages until the earth is filled with them, it seems almost presumptious for any one to offer new volumes to the world. Indeed, art is so long, life is so short, that every student has the right to demand of an author by what authority he doeth these things, and to challenge every memoir for its raison d'etre. This being so, it assuredly will not appear egotistical for the author to state that his voluntary task was first suggested by his own wants, and that to its performance he has brought the training, labor, and experience of years spent in the laboratory, the study, the classroom, and the hospital ward."

"To establish therapeutic facts the profession clings as with the heart and hand of one man—clings with a desperation and unanimity whose intensity is the measure of the unsatisfied desire for something fixed. Yet with what a Babel of discordant voices does it celebrate its two thousand years of experience!"

"This is so well known that it seems superfluous to cite examples of the therapeutic discord; and one only shall be mentioned—namely, rheumatism. In this disease, bleeding, nitrate of potassium, quinine, mercurials, flying blisters, purgation, opium, the bromides, veratria, and a host of other remedies, all have their advocates clamorous for a hearing; and above all the tumult are to be heard the trumpet-tones of a Chambers, 'Wrap your patients in blankets and let them alone.'"

Now, after going through thirteen editions, the same author gives a short preface to the fourteenth edition from which the following is quoted: "The alterations in the present edition of this treatise are more extensive than those in any previous edition for many years. Many of these changes are the result of an effort to make the book more available as a student's text-book without lessening its value as a work of reference for the practitioner or scientist."

"Articles on opsonic therapy and on the ion theory have been added. Also a number of new illustrations have been introduced where it was thought that they would elucidate the text; many of these are photographic reproductions of blood-pressure and respiratory curves from experiments made by the reviser.

"Continued ill health has prevented the original author of this treatise from taking any active part in the present edition and the entire labor has fallen on his son, Dr. Horatio C. Wood, Jr., who has been associated in the various revisions of the work for the past eight years."

Several years ago, when teaching Therapeutics in a local medical college, it was the reviewer's pleasure to place this book first on the list for the students' use. When this department of the college fell into other hands, in some unaccountable way Wood's Therapeutics was left off the list of books in the catalogue. The present year, in again assuming charge of this department in the same college (perhaps temporarily) it is my pleasure to recommend the book unqualifiedly to the class, as the work comes in the present volume richer, fuller and more complete in all details than any previous edition.

The master mind has proven by years of faithfulness the truth of the words uttered in the first preface. The place given it in medical literature should be one of the sources of gratification to the man who has labored faithfully for something like a half century.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF GYNECOLOGY. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago, Fifth edition, thoroughly revised. Octavo, 806 pages, with 431 illustrations, of which 75 are in colors, and 20 full-page colored plates. Cloth, \$5 net; leather, \$6 net; half-morocco, \$6.50. Lea & Febiger, Publishers, Philadelphia and New York, 1978.

This work has now progressed to its fifth edition. The first edition was issued something like ten years ago.

That a book of this character should hold its place in medical literature during the past decade and cause a demand for this number of editions is of itself complimentary to the work without any commendation that a reviewer might give.

Dr. Dudley was first to see the advantage of presenting gynecology along natural lines of cleavage, by causes, rather than regions. With the cause or nature of a disease in mind, the reader can readily follow it to any region it may invade, and understand and treat it, but the labyrinth cannot be so easily traversed the other way. He thus displayed and simplified gynecology as had not been done before, and his book was quickly appreciated, both by professors

for their students' use and by practitioners for their own. It grew in favor, and some years ago the author gave it further impetus and distinction by making all its abundant illustrations original, each drawn for its special place and purpose, and therefore exactly fit. He also saw his reader's advantage in showing him the steps of operations, a clinic on paper, and better than a clinic because the details could be studied at leisure. Now Dr. Dudley again responds to popularity by bringing out a new edition, thoroughly revised to date, with everything obsolete in text or picture eliminated, and with still more original drawings added. It is the strongest issue yet of a very strong book, and so will continue and improve upon its position as the one to be preferred by the practitioner having gynecology to do, or professors wishing to teach with the greatest efficiency.

The remarks on pages 106-107-108-109 concerning Plastic Operations serve as a good illustration of the value of the book.

On page 147, under the head of "Drainage in Major Operations," occurs the following: "Some surgeons consider the gauze objectionable as soon as it becomes saturated. In this connection we may again emphasize the importance of keeping the dressing over the drain absorbent and dry."

"The classical dictum has been 'When in doubt, drain.' If, however, the irritating influence of the drain is to cause secretion of fluid, which otherwise would not be secreted; if the peritoneum, left to itself, is capable of taking up and disposing of large quantities of fluid, even, to some extent, of septic fluid; for the drain is more prone to introduce than to carry out sepsis then the dictum may have to be reversed, 'when in doubt, do not drain.'"

While the previous volumes have been in great favor with the reviewer, the present volume comes so beautiful in its makeup, so clearly illuminated by illustrations so far above the ordinary, that we cannot help feeling that Dudley is giving to the profession a work that will be recognized more and more as time goes on.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopediacs, pathology, dermatology, onthalmology, otology, rhinology, laryngology, hygiene, and other topes of interest to stuents and practitioners, by leading members of the medical profession throughout the world, edited by W. T. Longcope, M.D., Phila'delphia, T. S. A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Phila'delphia, T. S. A., with the collaboration of Christoff, and the collaboration of Mm. Osler, M.D., Oxford; John H. Musser, M.D., Phila'delphia, J. S. A., with the collaboration of Christoff, and J. S. A., with the collaboration of Christoff, and J. S. A., with the collaboration of Mm. D., Phila'delphia; James J. Walsh, M.D., Chicago; Chas. H. Mayo, M.D., Rochester; Thomas H. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburg; John Harold, M.D., London; Richard Kretz, M.D., Vienna; with regular correspondents in Montreal, London, Paris, Bershold, Chenna, Leipsic, Brussels and Carlsbad, Vols, H. and HI. Eighteenth series, 1908, Philadelphia and London, J. B. Lippincott Company, 1908.

Vol. II contains a most excellent article. Edw. Turton, M.D., B.Sc., M.R.C.P., of the Hull Royal Infirmary, giving his two years' experience of treatment by inoculation of

BACTERIAL VACCINES.

This article by Turton is of more than usual interest along this line, because of the opportunities for using the vaccines in well-selected cases, and because of the apparent unbiased manner in which he has proceeded with the work.

In his report of cases, which are interesting, there seems no tendency to either pad the report or to detract from the efficacy of the vaccines when they have proven useful.

The following is an extract from his article: "As every new therapeutic method must be judged solely by the results obtained in the treatment of large series of cases, and as no single observer can accumulate a sufficiently large number for this purpose, I add

the record of my results to those already published.

"The series is of interest not so much on account of numbers, but from the great variety of affections treated and the different vaccines used. I have attempted to give a critical and impartial survey of 73 cases submitted to vaccine treatment, during a period of over two years. Limitations of space prevent the detailed record of every case, but some which present points of particular interest have been given more fully."

"It is obvious that treatment by vaccines can supplement but cannot entirely replace ordinary medical and surgical treatment; advantage must be taken of every means for doing good to our patients, which skill and experience can suggest. By raising the opsonic index we put the patient in a position to gain mastery over his disease, but fresh air, properly regulated rest and exercise, good food, regular habits and due attentions to the excretions, help him to do this and we must avail ourselves of their help wherever possible. This applies to the general health; much can also be done locally, for operative removal of diseased parts must be done whenever necessary. Pus must be evacuated wherever an accumulation exists, for it not only acts injuriously by its toxins, but by pressure closes the lymph-channels and prevents the opsonins reaching the diseased parts. In addition, it has been shown that the fluid contents of an abscess are almost denuded of opsonic elements and opening the abscess not only rids the body of toxic material, but permits a fresh supply of available opsonin to reach the organisms. In some cases it proves of advantage for the same reasons to produce local erythema by such artificial means as counter irritation, fomenting or by Bier's method of passive congestion. Such proceedings have proved of benefit in some of my cases.

"The question naturally arises as to the absolute necessity of carrying out estimations of the opsonic index in every case under treatment. The method of Wright and Douglas is a very delicate and difficult one, requiring a certain amount of manipulative skill and bacteriological knowledge, but only those who have made thousands of opsonic estimations can realize the enormous amount of time and energy to be expended before the opsonic index can be entered on the chart. When this has to be done scores of times in each case, both eyesight and temper suffer under the strain, and if the treatment of any number of cases is undertaken, together with ordinary hospital and private work, personal estimation of the opsonic index becomes a physical impossibility.

"With my earlier cases, I estimated the opsonic index every day, or every few days, before treatment, then I gave injections, at first very small in amount, and watching their effect, regulated the administration of the vaccine, as to dose and frequency, as seemed necessary to produce the maximum effect of a minimum dose of vaccine.

"After eighteen months of method, I asked myself if some general principle could not be discovered which would save all this work. As the result of analysis of my cases, the next plan was to work out the index very frequently at first, and by regulating the dose of vaccine try and find the minimum dose necessary to maintain the index above normal for a good length of time. This dose was then given at what seemed the best intervals, with occasional estimations of the opsonic index to assure oneself that it was being maintained at a satsifactory level. Such a routine I did not regard as an ideal one, but the best that could be worked with many demands on professional time. Experience of a large number of cases showed that it was possible by such a scheme to so space the injections, as to produce as good results as previously, with much less expenditure of time.

"The step which naturally followed was to inject at stated intervals, without estimating the opsonic index at all. After having treated a large number of cases on this plan, I am of the opinion that quite as good results can be obtained by so doing, provided that the doses and interval of administration are those which opsonic estimations showed to be correct according to experience previously gained. therefore now inclined not to insist on estimations of the opsonic index as a routine plan, because the enormous labor and expenditure of time is not paid by correspondingly good results. Although this is the plan carried out in treating tubercular and staphylococcic affections. I still estimate the opsonic index for scientific reasons in infections with which I am not so familiar."

Volume III has an article entitled "On the Trail of the Sub-Conscious," by James Jastro, Ph.D., Professor of Psychology in the University of Wisconsin.

While this article is about as clear to the ordinary reader as most efforts on this subject are, there is nevertheless much of interest in it.

The article is rather long, and doubtless many will tire of the subject before concluding it, but I take the liberty of quoting the last rather lengthy paragraph:

"Morals are effective inversely to their length. Yet easy solutions are misleading. The simple life offers no ideal which the psychologist can accept as a beacon or a refuge. The waters upon which he sails are too vast and too deep, the currents too diverse, the conditions of sea and sky too variable, the seasons too irregular, for any simple rules of navigation. Yet the whole art is based upon the fidelity of the con-

pass, the faith in the illumination of our nature that scientific investigation confers. The demand for practical benefit is insistent, and when fairly presented, legitimate; for, after all, harbors must be reached, the traffic kept going despite our ignorance and the perils of the deep. Within our own day and within our own land have appeared the most comprehensive attempts to regulate human life by an appeal to the mental nature, and specifically by utilization of

SUBCONSCIOUS INFLUENCES.

Let the physician not be dismayed by the fact that the most widely heralded and popular systems repudiate his status, and place drugless healing and antimedical ministration as modern consummations side by side with wireless telegraphy and horseless carriages. Nostrums are as inimical to the integrity of his career as are absent treatments; and though appealing to a different clientele, their efficacy is similarly conditioned, their perils an equal It has, however become a menace. paramount obligation of the medical man to find a place in his theory and practice for the range of influences to which I refer. Mental therapeutics must be legitimized; for the mind is like issue with the body, and sanity is the health of both. The wise incorporation of mental healing can be entrusted only to the trained wisdom of the medical practitioner. That in this pursuit he will continue undauntedly to base practice upon scientific precept is the warrant of his authority, and despite temporary fluctuation, will be the mainstay of his prestige. That in this pursuit he is ready to welcome the aid of other disciplines with allied interests and community of purpose, is evidenced by the honor which you have paid to psychology in asking me to address you; that thus reinforced, the practical and remedial efficiency of subconscious influences may be rendered

wisely available to mankind, is the hope with which I conclude."

Volumes II and III, while perhaps not having among the list of contributors as many men of well-known prominence in the medical profession as some of the previous volumes, nevertheless contain so much valuable material placed in the form of clinical work, that they will serve well to keep the practitioner in touch with the present day work in colleges, hospitals and medical societies.

International Clinics take the place in medical literature that is filled by no other work, and every man in the profession, whether he be young or old, cannot do better for his library than to place these valuable volumes therein, and spend his leisure time in carefully perusing them.

A TEXT-BOOK OF SURGICAL ANATOMY. By William Francis Campbell, M.D., Professor of Anatomy at the Long Island College Hospital. Octavo of 675 pages, with 319 original illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5 net; half morocco, \$6.50 net.

The short preface of the author may well be quoted here, as it gives the idea on which the book is founded, and throws some light on the character of the book.

"Anatomic facts are dry only as they are isolated. Translated into their clinical values they are clothed with living interest.

"No teacher can impart, or student assimilate, all the details of anatomy. The facts must be sifted, their comparative values fixed, and the reason for their acquisition demonstrated by directing attention to the practical problems with which they are associated.

"A fact that can be utilized is a fact that will survive. No attempt, therefore, has been made to present all the anatomic data. Those facts only have been selected which have a practical bearing, and those structures and regions emphasized which have a peculiar interest for the surgeon.

"Surgery is anatomy practically applied, and the 'anatomic mind' is as essential to a surgeon as the 'aseptic conscience.' The single purpose of this book is to aid the student and practitioner in mastering the essentials of practical anatomy. Due acknowledgment of the various sources from which the material has been gleaned is made the bibliography appended. facts themselves are the products of many minds and the accumulation of many years. Only the manner of their presentation and the attempt to estimate their clinical values can be credited the author."

The work is exceedingly well gotten up, comprising nearly 700 pages of beautiful type, excellent paper, most commendable illustrations, and an exceedingly easy manner of expression. It is divided into six parts, as follows:

Part I—On Head and Neck; Part 2—The Thorax; Part 3—The Upper Extremity; Part 4—The Abdomen and Pelvis; Part 5—The Spine; Part 6—The Lower Extremity.

In Part 1, under Surface Anatomy, occurs the following: "The anatomy that may be studied upon the living subject, the many anatomic facts which the student may demonstrate upon his own person, such as the bony prominences, the course of the vessels and nerves, the various anatomic landmarks, etc., should emphasize the importance of a thorough mastery of these obvious facts before proceeding to a study of the deeper structures."

Under the abdomen and its conditions, the surgical anatomy of the various forms of hernia is beautifully and graphically described.

While at the present time the medical world is overflowing with literature, the reviewer predicts a place for this work that will not only be given wide recognition by the profession at large, but a demand for future editions that will be something of a surprise to the author.

CALIFORNIA STATE BOARD OF MEDICAL EXAMINERS.

Questions of the December, 1908, Examination Held at Los Angeles.

ANATOMY.

1. Describe the venous circulation of the rectum.

rectum.

Give point of abdominal entrance (vertebral), course and point of division of the abdominal aorta. (Use diagram.)

Describe the articulation of a typical rib (7th) with the spinal column.

Describe the plan of distribution of a typical dorsal spinal nerve. (7th.)

What are the bony landmarks of the hip and what lines determine the normal relations of the joint?

What nerves control the following mus-

6. What nerves control the following muscle groups: (a) flexion of the knee, (b) extension of the knee, (c) adduction of the thigh, (d) extension of the hip?

What visorra are behind the linea alba? Give relation of the aortic arch to the anterior chest wall. (Use diagram.) Give topography of the spleen. (Use 8. 9.

diagram.) Give topography of the kidneys. (Tise diagram.)

GYNECOLOGY.

- 1. Name the different varieties of genital fistulae in the female, and give their cause?
- Diagnose between a small fibroid in the anterior uterine wall, an inflammatory and an anterflexion of the exudate. nterns?

- Give five reasons for amenorrhoea in addition to removal of the organs.

 What is meant by primary, intermediate and secondary repair of the perineum and the reasons for the selection of each?
- Name the vessels to be ligated in the operation of panhysterectomy and give
- their origin.

 6. Differentiate between a small ovarian cyst and extra-uterine pregnancy, and
- between large ovarian cyst and ascites. Under what conditions would the operation of Colpocleisis become necessary or advisable?
- Differentiate between pelvic peritonitis pelvic cellulitis?
- Differentiate between an intra uterine or submucous fibroid, a partial inversion of the fundus of the uterus and a
- bicornate uterus.

 Give all the (or 3) reasons you know for a panhysterectomy.

HISTOLOGY.

- 1. Name the derivatives of the primary blastodermic layers.
- Draw a diagram of a cross section of the wall of the aorta, showing the histological structure.
- Describe the histological structure of the tongue.
- Describe the process of indirect cell di-vision, or Karyokinesis. Describe the histological structure of the cornea.
- Draw a diagram of a cross section of the wall of the esophagus, showing his-tological structure.
- Describe the histological structure of the parotid glands.
 Identify two specimens.
 Identify two specimens.
 Identify two specimens.

PATHOLOGY.

- Name and describe the common varieties of Cestoda (tape worm) that may infect man.
- What are the causes of renal calculus, and what pathologic results may accrue from nephrolithiasis?
- What is the macroscopic appearance of the placenta in hereditary syphilis?
 Give the typical minute pathology of
- epitheliomata.
- What is the most frequent lesion productive of heart block, or the Stokes-Adams Syndrome?
- f what significance are the eth sulphates or indexyl in the urine?
- Give the gross and microscopic details of the lung in broncho-pneumonia.

 Discuss the theories of the cause of pollomyelitis, and state what are the essential lesions in the cerebrospinal
- What are the characteristic features of the blood in myelogenous leukemia? Give the gross post-mortem findings.
- 10. Identify two microscopic specimens.

HYGIENE.

- 1. Describe the "septic tank."
- What is meant by, and give the history of, the term "certified milk." Give the substitutes frequently used for
- barley, malt, and hops.
 What diseases in cattle, sheep and hogs are causes for the condemnation of the carcass?
- ame the most prominent preventable disease and indicate the mode of pre-Name the vention.
- 6. Discuss the relative value of sulphur and formalin in fumigation.
- Name the diseases which the U. S. government quarantines against in American ports.
- Describe the experiments conducted by the army in Havana which led to the discovery that mosquitoes are the cause of yellow fever.
- 9. Describe the bile test and the Widal test for typhoid fever.
- What are the arguments for and against cremation as a method for the disposal of the dead.

PHYSIOLOGY.

- 1. Give examples of the reversible action of enzymes.
- Detail the digestion and absorption of fats.
- (a) What a) What is the fate of nutriment enemas? (b) Write a suitable formula for rectal feeding.

 4. Give the distribution and function of the
- fourth cranial nerve.
- Locate the lesion in a motorparalysis involving the left side of face and left upper extremity, in which the reflexes are exaggerated, but the muscle nutri-tion and electrical reaction are unimpaired.
- 6. Where are the following centers: (a) speech, (b) micturition, (c) respiratory, (d) auditory, (e) vision.

SURGICAL **SPECIALTIES**



OBSTETRICAL SPECIALTIES



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LONDON, ENGLAND, 31-32-33 High Holborn.

- Discuss the causation of the icterus frequently observed in the new-born.
 Describe the fetal circulation.
 (a) Distinguish between the corpus luteum of menstruation and the corpus luteum of menstruation (b) In what and
- luteum of menstruation and the corpus
 luteum of pregnancy. (b) In what part
 of the genital tract does fertilization
 of the ovum usually occur.

 10. Define: (a) cytolysis, (b) aphasia, (c)
 gravid, (d) cloaca, (e) hemianopsia, (f)
 neurosis, (g) fovea centralis, (h) glycogen, (i) somnambulism, (j) plasmolysis

BACTERIOLOGY.

- 1. Describe in detail the method of making a bacteriological examination of water. (b) State how you would estimate the number of bacteria per cubic centimeter.
- ptomains? 2. (a) What are four and state from what substances derived.
- toxin; Define: Antitoxin; bacterin: cymno-bacteria; spore.
- State the composition of Loffler's blood serum medium. (b) Describe the manu facture of glycerin agar.
- State the most frequent causal organisms in appendicit's, malignant pustule.
- ulcerative endocarditis, conjunctivitis.
 6. Give name and morphology of organisms producing tetanus, cerebro-spinal meningitis, pyelitis.
- 7. Differentiate between: Pyogenic and toxicogenic; parasite and saprophyte; chromogenic and photogenic. (b) Give one example of each.
- 8. State briefly the steps you would take to examine sputum, spinal fluid, pus.

- Fxamination of two slides.
 Examination of two slides.

OBSTETRICS.

- Describe and give pathology of some of the principal causes of sterility in the female.
- 2. Give some of the causes of sudden death which sometimes occurs during gestation (of mother).
- Describe in full the effect which gonor-rhea in the female may have on pregnancy, the puerpural state and on the child.
- Give a full description of foetus of sixteen weeks. of the human
- Give the clinical symptoms that would lead you to fear impending rupture of the cervix during the first stage of labor; the causes that give rise to this condition and the best way to prevent its occurrence.
- State your directions to the nurse for the care of the new born child for the first
- care of the new both child to forty-eight hours. Give relative frequency, causes and man-agement of persistent occipito-posterior position.
- Give clinical symptoms which would lead you to fear placenta revia and how would you marage such a case?

 Describe the Walcher posture; when is it best to use it; and what diameters of the pelvis does it change and how much?
- 10. Describe fully what changes take place in the uterus during the two weeks im-mediately following childbirth and what precaution should be taken to prevent interference with this process.

CHEMISTRY AND TOXICOLOGY.

1. (a) Define sublimation. (b) What are the gene al properties of the hydrocarbons?

(a) Give classification of proteids. (b) What general reactions have they? (c) Describe two color reactions for same.

(a) Describe analysis of water suspected

of containing organic matter. (b) Test for lead in drinking water. (a) Describe cholesterin crystals, solubil-

ity, insolubility. (b) To a few crystals on a slide under the microscope add a drop of concentrated subbluric acid. De-scribe the effect. (c) Dissolve a few crysta's in a little chloroform then add an equal volume of sulphuric acid and shake. Describe the effect. (d) How would you extract from urine? How separate f om fat?

(a) Make a table of the average composition of urine (normal constituents)

(b) Name ten pathological constituents
(abno mal conditions).

a) Describe acid phosphate of calcium.

(b) How distinguished from uric acid.(c) What is its pathological significance when found in urine?

7. (a) What is the most constant constituent or urinary deposits? (b) Constantly recurring indicates disease of what or-

gans?

 Define and give three examples each: Corrosive poisons; irritant poisons; neurotic poisons.

9. Describe a case of oxalic poisoning and outline treatment.
10. (a) Describe the three stages of trichinosis. (b) Give treatment for iodin poisoning.

GENERAL DIAGNOSIS.

1. Differentiate Hodgkins Disease and Tuberculous Adenitis.

Differentiate Embolism and Thrombosis. Give the cause of Malaria, the varieties Organisms found in each form and state how the disease is most likely conveyed.

4. What casts are frequently found in Albuminous Urine, and what do they denote?

Define the terms Thrombus, Phlebitis and Varix and give causes of each.

Describe the several varieties of Club-Describe the Varieties of Hydrocele.

Describe acute Miliary Tuberculosis.

9. Give the physical and rational signs of Pericarditis before and after effusion.

10. Give the pe iod of Incubation and of Eruption of the Exanthema.

UNITED STATES ARMY-EXAM-PLES OF WRITTEN QUESTIONS.

Preliminary Examination.

*Examination for Medical Corps of the Army will be held in San Francisco January 11, 1909. For particulars address Surgeon-General, United States Army, Washington,

MATHEMATICS.

Note-In each case give a concise explana-tion of the method by which the result is obtained,

A. ARITHMETIC.

1. What is the weight (metric) of 8.17 liters

of alcohol of a specific gravity of 0.83?
2. Find the greatest common divisor of the

2. Find the Brown of following: 84, 252, 168, 210. 3. What is the interest of \$475.05 for 1 year, 9 months and 14 days, at 7.3 per cent.? 4. What is the area of a circle the diameter of which is 24 meters?

B. ALGEBRA.

5. Find the value of x, y, and z in the following: 5 x + 2 y - 20 z = 20. 3 x = 6 y + 7 z = 51.

4 x + 8 y - 9 z = 53

6. Find the value of x and y in the following:

$$\frac{5}{x} + \frac{6}{y} = 2.$$

$$\frac{15}{x} - \frac{3}{y} = 2.5.$$

7. Find the value of x and y in the following:

$$x^2 + xy = 24$$
.
 $xy + y^2 = 40$.

C. GEOMETRY.

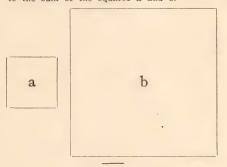
8. (a) Define the following terms: "Circle;" "Radius;" "Secant;" "Chord."
(b) Show by demonstration that the sum

of the three angles of a triangle is equal to

two right angles.

9. Show by demonstration that the area of a triangle is equal to half the product of its base by its altitude.

10. Construct a square equivalent in area to the sum of the squares a and b.



GEOGRAPHY.

1. Where is the Strait of Juan de Fuca? The Strait of Magellan? The Strait of The Belleisle?

2. Where is the Island of Malta? The

2. Where is the Island of Maita? The Island of Jersey?
3. What territory is embraced in the watershed of the Ohio River?
4. What countries, towns, and principal points are on or near the fortieth parallel of north intitude?

5. Where are the Humboldt Mountains?
The Ural Mountains?
6. Where is Pike's Peak? Mount Rainier?
7. Upon what bodies of water would a vessel pass between Philadelphia and Copen-

HISTORY.

When, where, and by whom was the first settlement made within the aries of the United States? within the present bound-

Give a brief account of the French and

Indian war.

hagen?

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are often irritated, cracked and eroded by powerful antiseptics like carbolic acid, corrosive sublimate, etc. Any effective means of relief cannot fail to be gratifying.

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LONDON, ENGLAND, 31-32-33 High Holborn.

3. Describe the siego of Yorktown. When were the States of Oregon and Washington admitted to the Union? What were the respective claims of the United States and England to the ter-

Describe the principal naval battles of

What was the Missouri compromise?
4. Relate some of the events leading up to and occurring during the French Revolution. Who was the first king of the house of Tudor?

Why was Mary Queen of Scots put to

GENERAL LITERATURE.

- 1. Mention four (4) of the literary men of the "Elizabethan period." 2. Name three (3) well-known German
- Who were the best known literary men of the reign of Queen Anne?
 4. Name three (3) of the Latin poets of the
- time of Augustus.
- 5. Who was Dr. Samuel Johnson? What was his most important work?
 6. Name three (2) of the novels of Thackeray, and some of the principal characters in
- Who was Sir Francis Bacon? did he live?
- 8. Name four (4) of the books of Nathaniel Hawthorne.
- Name three (3) well known American historians, and two (2) of the works of each.

10. Who was Thomas Carlyle? Name three (3) of his more important works.

LATIN.

1. Translate literally into English the following:

Recipe Potassii Iodidi semiunciam, Liquoris Potassii Arsenitis guttas duod Cinnamomi uncias duas. Misce. duodecim, Aquae

Signetur: una drachma ter in die.

2. Write the following in the form of a prescription. Do not abbreviate the Latin words, giving them in full. The quantities should be stated in terms of the metric sys-

Mix and make an emulsion of 250 parts of cod liver oil; water, 375 parts; simple syrup, 125 parts; sugar, 750 parts; gum arable, 156 parts. Dose: 15 to 30 grams daily.

- Translate literally into English the following anatomical terms:
 - Flexor profundus digitorum.
 Triceps.

 - 3. Chorda Tympani.
 - Scapulae.
 Linea media.
- 4. Translate freely the following, which speaks of the German warriors and their families on the battlefield:
- "H: (infantes) cuique sanctissimi testes, hi maximi laudatores. Ad matres, ad conjuges vulnera ferunt: nec illae numerare aut exigere plagas pavent. Cibosque et hortamina pugnantibus gestant."

5. In the quotation of question 4:

What verb is understood in the first sentence?

What part of speech is "culque?"

- Name the nouns and their cases in the last sentence.

 The word "bellatores" is understood before "feuunt," what is the meaning of the word?
- What nominative pronoun is understood before "gestant" in the last sentence?

ANATOMY.

1. Give the names and relations of bones entered in the formation of the skull.

 Describe' the hip joint.
 Give the origin, insertion, and surgical anatomy of the superficial abdominal muscles.
4. Describe the lobes and convolutions of

the brain with especial reference to cerebral localization.

Discuss the anatomy,

descriptive and surgical, of the male perineum.

PHYSIOLOGY AND HISTOLOGY.

1. Trace the course of sensory and motor impressions between the brain and foot.
2. What are the causes of the sounds of the heart?

To what is arterial pressure due? How is it regulated?

3. Describe the mucous membrane of the small intestine, and give the process of ab-sorption of the products of digestion.

4. Describe the corpuscles found in human

blood, and discuss their origin and functions. 5. Give the composition of urine and trace the course of each substance through the body.

CHEMISTRY AND PHYSICS

1. Define the terms: 'momentum;" 'gravi-ation;" 'gravity;" 'weight;" 'specific "specific tation;" gravity."

gravity."

2. What velocity will a freel "falling body attain in five seconds?

3. What is the principle of the hydrostatic press? Of the siphon? Of the lifting manp?;

4. What is a "voltaic battery?" What is the source of its energy?

5. What is the "solar spectrum?" Explain

the phenomenon.

6. Define the following terms: "Acid;"
"base:" 'salt;" 'valence;" 'radical."
7. Give the chemical properties of "mer-

cury." Describe a reliable test for it. Men-tion compounds of mercury used in medicine. Name three (a) metals of the

group."

9. Write equations showing the reaction taking place when sodium hydroxid is added to each of the following acids: Hydrochloric: sulphuric; acetic.

10. Describe in detail a reliable method for determining the quantity of sugar in diabetic urine

MATERIA MEDICA AND THERAPEUTICS.

1. What do you understand by specific med-

Name five (5) that are so considered, the diseases in which they are effectual, their doses and how given?

Mention all the methods by which medication is directed through the skin, examples of each, and the object of each example.

3. Tabulate any classification of medicines.

4. Write a prescription which you are sure to be curative of round worms in a child. Use both apothecaries and metric weights and measures.

5. From a surgical point of view what articles of the materia medica should you have always on hand?

SLIGERY.

1. Discuss the etlology, symptoms, diagnosis, and treatment of strangulated inguinal hernia

2. What are the suture materials used in surgery and how are they sterilized?
3. Discuss the etiology, symptoms, diag-

and treatment of malignant pustule.

4. Give the surgical treatment of stone in the polvis of the kidney.

5. Describe in detail the conservative treatment of a compound fracture of the head of the tibia opening into the knee joint.

PRACTICE OF MEDICINE.

1.º Give the symptoms and physical signs of acrtic insufferency.

2. Give the differential diagnosis between

2. Give the contractual diagnosis between gastric ulcer and gastric cancer.

3. Give the symptoms and diagnosis of typhoid fewer in the first week.

4. Give the symptoms and physical signs of acute military tuberculosis of the jungs.

5. Give the symptoms and differential diagnosis of fewer the symptoms and differential diagnosis. nosis; of riocomolor; alaxid, in the preataxic stage.

OBSTETRICS AND GYNECOLOGY.

1. Discuss the changes which take place in the organs of the mother during normal pregnancy.
2. Discuss

the causes and treatment of

2. Discuss the cause difficult labor.
 3. Give the etiology, pathology, symptoms, and treatment of puerperal cclampsia.
 4. Give the etiology, symptoms, and treatment or andometritis.

ment of cervical endometritis.

5. Give the etiology, symptoms, and treatment of retroflection of the uterus.

THERAPEUTICAL HINTS

HEADACHE AND CONSTIPATION.—Recently a new departure in this special branch of remedial medicine has been made by the Pax Chemical Company. In the preparation of their remedy, which is issued under the name of "Pax Pellets," the association of Acetanilide.

Phenacetine, Morphine and habit-forming drugs is entirely eliminated, and in their stead is used a special combination of Phenolphthalein with harmless analgesics and stimulants.

These pellets are described as a nondepressant analgesic and tonic laxative.

and are said to be speedy in the relief given, stimulative in action, devoid of ill effects, and remedial in results.

The same company is issuing under the name of "Phenalein" a special preparation of Phenolphthalein as a remedial laxative in cases of obstinate constipation and safely applicable during pregnancy and after operations.

Both Pax Pellets and Phenalein are ethical remedies prepared for the use of physicians, and are only advertised to the medical profession.

A "K-Y" Cone will be sent physicians on receipt of 25 cents and, in addition, a collapsible tube of "K-Y" Lubricating Jelly *free*. Van Horn & Sawtell, 307 Madison Avenue, New York City.

In Sulpho-Lythin, however, we have a true and reliable hepatic stimulant, which, if administered intelligently, will restore functional activity of the hepatic gells, and which may be taken continuously, when necessary, without objectionable or interious action.

That this preparation has been found to permanently overcome the persistent vomiting of pregnancy, in many cases, as reported by reliable observers, is the best evidence of its efficiency.

This product is presented exclusively to the medical profession by the Laine Chemical Co., Manfg. Chemists, New York, who will gladly furnish further information and complimentary trial sample upon request.—American Journal of Surgery, June, 1905.

A Popular Saline Laxative.—Druggists doing a large prescription business report a phenomenal increase in the demand for granular effervescent aperients. There are any number of these upon the market of various grades of efficiency; but physicians seem to prefer

the simple salts, prescriptions calling for sulphate of magnesia and sodium phosphate outnumbering materially those demanding compounds of known or partially secret character. Saline Laxative (Abbott) seems to be regarded as the representative preparation of magnesium sulphate and as it is even stronger than the official magnesii sulphas effervescens and decidedly more pleasant to take, it is very generally given the preference. Saline Laxative (Abbott) is obtainable in air-tight tin containers, also in bottles, and comes in three sizes, small, medium and large, so that any desired amount may be prescribed with the assurance that it will reach the patient in first-class condition.

IN PARTING WITH FRIENDS.

If thou dost bid thy friend farewell, But for one night though that farewell may be,

Press abou his hand in thine.

How canst thou tell how far from thee Fate or caprice may lead his steps ere that tomorrow comes?

Men have been known to lightly turn the corner of a street,

And days have grown to months, and months to lagging years

Ere they have looked in loving eyes again.

Parting at best is underlaid with tears and pain:

Therefore, lest sudden death should come between,

Or time, or distance, clasp with pressure firm

The hand of him who goeth forth.

Unseen, Fate goeth, too.

Yea, find thou always time to say some earnest word

Between the idle talk.

Lest with thee, henceforth, night and day.

Regret should walk.

-Coventry Patmore.

HYDROLEINE

An emulsion of cod-liver oil after a modification of the formula and process devised by H. C. Bartlett, Ph. D., F. C. S., and G. Overend Drewry, M. D., M. R. C. S., London, England.

STABLE

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Distinctively Palatable Exceptionally Digestible

Hydroleine is simply pure, fresh, cod-liver oil thoroughly emulsified, and rendered exceptionally digestible and palatable. Its freedom from medicinal admixtures admits of its use in *all* cases in which cod-liver oil is indicated. The average adult dose is two teaspoonfuls. Sold by druggists. Sample with literature will be sent *gratis* on request.

THE CHARLES N. CRITTENTON CO. 115 FULTON ST., NEW YORK.

WE ARE ALL DESCENDANTS OF KINGS.

Go back but thirty-one generations, doubling each time, and you are surprised to find, all in that thirty-first generation, more than 1,980,000,000 grandparents of yours, each with exactly twenty-nine greats. Now, how can this be, you wonder, when the total population of the world today is less than that figure, or about 1,500,000,000. And the world's people have been multiplying ever since the creation! How can this be then? At that time, about 800 years ago, there seem to have been living more ancestors of yours than the total population of the earth. This inconsistency, of course, is due to the fact that in those days one ancestor was roosting in many different branches of your family tree. But when your ancestry gets back this far you are practically certain of finding a king somewhere, or surely some person of royal descent.

The Marquis of Ruvigny lately published a work containing 11,723 living and legitimate descendants of Kings Edward IV and Henry VII of England and James III of Scotland, and even then the list is incomplete. On the basis of these figures some British statistician some months ago estimated that had the progeny of all British kings multiplied in proportion there would be 400,000 of their legitimate royal descendants now living. Thus, being a royal descendant does not put us in a very exclusive class after all. Where the exclusiveness comes in is having the money

to pay the genius who can trace it all out for you, and then, even if he doesn't bunco you, you are apt to find yourself hitched to not a very creditable assortment of thieves and murderers.

The best writers in French literature have belonged to the middle, or bourgeois class. Moliere, Boileau, Racine, La Fontaine, Voltaire, De Musset, Sainte-Beuve, all these "were not only bourgeois by birth, but by turn of mind." English literature, however, illustrates this fact quite as emphatically. Shakespeare was the son of a glover. Milton of a scrivener, Samuel Johnson of a book seller, Richardson of a joiner, Collins of a hatter, Gay of a silk mercer, Pope of a linen draper, Keats of a livery stable keeper; Cowley and Moore were sons of butchers. It is noteworthy that the trades have done far more for literature than the professions. Besides those already named, innkeepers, vintners, painters, and glaziers, barbers, weavers, printers, tailors, shoemakers, jewelers, basket makers, bricklayers, have furnished brilliant recruits to the ranks of authorship. The peasantry, too, can boast of such sons of the soil as Robbie Burns, John Clare, John Leyden, James Hogg, William Carleton, Robert Bloomfield, and many others.

UTERINE DEVIATIONS.

Dr. Lucy Waite of Chicago in an address before the International Medical Congress on *The Clinical Significance of Uterine Deviations*, arrived at the following conclusions:

- I. The normal position of the uterus is one of passive mobility, and a non-metritic, freely movable uterus may lie in any position in an otherwise normal pelvis without producing symptoms.
- 2. Uterine deviations are pathological and can be correctly designated displacements only when the uterus is

permanently fixed in any given position or its normal mobility compromised.

- When retrodevitation of the uterus is found in any given case of pelvic disturbances, further investigation will reveal complications which have produced the symptoms.
- 4. Diagnosis of uterine positions cannot be made from symptoms.
- 5. Menorrhagia, chronic backache, constipation and pelvic pain are in no sense classical symptoms of retrodeviations of the uterus, being found in a large percentage of cases of anteplaced uteri and are due to complications regardless of the position of the uterus.
- 6. Dysmenorrhea, sterility and vesical irritation are not classical symptoms of anteflexion as commonly taught, the dysmenorrhea and sterility being due to the accompanying myometritis, ovarian and ovaductal irritation, to an accompanying cystitis, the bladder being involved in the general pelvic inflammation.
- 7. Many cases of dysmenorrhea are a pure neurosis, the accompanying flexion being only a coincidence, and gynecologists must extend their observations beyond the pelvis if they discover the true etiology of many symptoms which manifest themselves most prominently it may be in the pelvis.
- 8. The principal factor in the causation of fixation of the uterus is the peritoneal perigenital adhesions. The uterus may be fixed also as regard the relative position of the body and cervix, by inflammation of it own tissues, myometritis.
- 9. The rational treatment in any given case is to treat the complications which are in reality responsible for the symptoms, leaving the liberated uterus in its original state of anatomical and physiological mobility.
- 10. Fixation of the uterus by surgical intervention is therefore only substituting one pathological condition for another.





